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There are circumstances which compel a new review of the old and familiar diseases. As a rule we find that their clinical portraiture leaves little room for improvement. From time to time, however, research adds novelty or precision to our ideas of cause or points the way to a new therapy. Among the acute diseases lobar pneumonia maintains a high incidence through the generations, and there is no present sign that preventive medicine will make it rare as typhoid fever has been made rare. It remains an important cause of anxiety and mortality in every practice. Of its ætiology, its clinical features and course, and its immediate and remote dangers there is a general appreciation. Many views on therapeutic detail have been voiced and many supposedly specific remedies have been vaunted, but the general principles of management are firmly established. Fraenkel's discovery of the causal pneumococcus in 1884 gave the disease its status as an acute specific fever, but led to no revolution in treatment. More recent work has resulted in the recognition of three main types of pneumococcus and of a fourth heterogeneous group of organisms all capable of causing lobar consolidation of the lung. It has been shown in what proportion these different types are responsible for the disease and how they vary in their individual virulence. The latest outcome of these discoveries is the preparation of protective sera, and notably of Felton's concentrated serum, which is shown to have a certain degree of potency in combating infection with pneumococcus Types I. and II.

While serum therapy in pneumonia may still be said to be on trial enough has been published to set us thinking and to provide those of us who practise with some difficult problems in judgment. These may be briefly stated as follows. We need to know how far it is now incumbent upon us to consider the employment of serum in lobar pneumonia as a routine, or if this is not warranted, how we should select the cases to be so treated. Recognising that the method calls for experience and considerable technical skill we also need to know whether cases can be adequately handled in the home and, if not, whether they ought to be moved to hospital in face of the belief that, given good conditions, the avoidance of such a transfer generally provides a better prospect of recovery.

It is a main purpose of this communication to seek an answer to these questions. My personal experience of serum therapy in pneumonia is negligible, but I have long been interested in the natural history of the disease, and it was my good fortune to be a participant in the discussion on serum treatment at the summer meeting of the British Medical Association. I have also had the pleasure of meeting several of the leading British and American investigators and of serving on committees which are closely concerned with the problem.

There have been discoveries in the scientific treatment of disease in recent years which have been promptly accepted and universally applied, so apparent and remarkable were their achievements. Of such are insulin in diabetes and liver treatment in pernicious anæmia. The antipneumococcal sera, also due to careful scientific studies, are, however, in a different category and for various reasons have produced no such dramatic change in practice. They demand special care and experience for their administration; their preparation is costly; they show a limited specificity; it is very difficult to assess the several causes of symptoms and mortality in the disease which they are intended to benefit; and, finally, this disease has already a high natural recovery-rate. We are not entitled to conclude from this that sera will find no established place in our therapeutic armoury. Rather should we seek to determine the scope and limits of their utility.

Now we cannot discuss the merits of a new remedy unless we have a just appreciation of the natural morbidity and mortality of the disease which it is purported to relieve or cure. For this reason I must ask attention first of all to the difficult matter of prognosis in pneumonia—that is to say, of pneumonia when left to nature and the nurse. Thereafter, having briefly reviewed the contributions of non-specific therapy and the methods and results of serum therapy, I shall attempt an estimate of the extent to which we should be prepared to modify practice on the basis of the newer knowledge.

Mortality and Prognosis

As has been implied, we cannot claim that we are able to reduce the mortality or alter the morbidity of a disease until we know what its mortality and morbidity are. When, as in the case of pneumonia, these vary in some degree from year to year, very considerably from country to country, and markedly so in respect of age-incidence, social environment, individual constitutional factors, and the type of invading organism, our difficulties become very complex. Both the prevalence and mortality of pneumonia in the United States, where the bulk of the work on serum therapy has been done, are more serious than in this country and to some extent our conclusions must be drawn anew.

At present we have hospital figures in England and Scotland which show that the mortality of lobar pneumonia lies somewhere between 10 and 20 per cent. Dr. R. J. Waterfield (personal communication), investigating the figures at Guy's Hospital over a nine-year period ending in 1930 found a total mortality of 16 per cent. between the ages of 13 and 75 years. One-third of the deaths occurred over the age of 50. There were no deaths between the ages of 15 and 20. We have no exact figures as to the mortality of patients treated in their homes, and I imagine that many more patients in this country are treated in their homes than in hospital. As the graver cases and the poorer cases tend to find their way to hospital and as the act of removal is often undertaken rather late in the disease and is not always beneficial to the patient, it would be reasonable to expect a lower mortality among patients treated at home. A death-rate in the neighbourhood of 10 per cent. is suggested by general practitioners of wide experience. The mortality from lobar pneumonia among the troops at Aldershot during the war was shown by Abrahams [1] to be as low as 10·5 per cent. Here the patients were mostly picked men of military age, and it is probable that they were moved to hospital in the earliest stage of the disease. At a base hospital in France

* An address given to the West Herts and Watford Medical Society on Feb. 15th.

Malloch and Rhea[2] found a general mortality of 26·1 per cent., with a higher rate among those coming long distances by convoy or hospital train than among base details. Cecil,[3] in the United States, reports that the death-rate of pneumococcal pneumonia varies considerably with the class of patient studied, being lowest in private practice, somewhat higher in the hospitals of the better class, and highest in the large hospitals draining the slum areas. Thus the mortality at the Rockefeller Hospital is 19·5 per cent. and at the Bellevue Hospital 35·8 per cent. Among 422 cases (all types) untreated with serum Cecil found a mortality of nearly 36 per cent. Among 429 cases (all types) treated with serum there was a mortality of 28 per cent. Even this lower figure approaches twice the Guy's Hospital figure. It is clear that pneumonia is a more serious menace in the United States than in the British Isles.

Turning to morbidity in hospital cases Dr. Waterfield finds that approximately 90 per cent. of the cases which recover do so without disability, so that there is no overwhelming argument in favour of an additional therapy on this score, even though it be shown that serum is capable of producing an earlier defervescence.

Leaving statistical data let us next consider the factors which are commonly accepted as influencing prognosis in the individual. So far we have recognised that youth and good environment are favourable and that poor conditions and advancing years are unfavourable. Other prognostic indications have been repeatedly observed at the bed-side. The presence of a chronic disease or of alcoholism weights the scales heavily against recovery. Cyanosis is adverse, delirium by no means necessarily so. Wide extent of lung involvement, although frequently, is not always of bad import. A low and particularly a falling blood pressure gives cause for concern. The pulse-temperature-respiration ratio affords valuable guidance; while parallelism is maintained or pulse- and respiration-rate are slow in proportion to the temperature hopes are good, but if pulse- and respiration-rate rise unduly while the temperature swings or falls, there is cause for grave anxiety. A clean tongue and nourishment well taken are encouraging. A good leucocytic response, in the neighbourhood of 20,000 cells per c.mm., has always been accounted favourable, and a complete absence of leucocytosis as very unfavourable. Intermediate figures must be balanced with the clinical findings. The pneumococcus may be grown from the blood stream in the early stages of pneumonia in a certain proportion of cases. A profuse growth or persisting positive blood cultures as the disease advances are now known to be very adverse. Pericarditis and meningitis, other expressions of the septicæmic state, usually foretell a fatal termination. Pneumococcal peritonitis has its special incidence in childhood and may occur with or without evident pneumonia; the death-rate is high but recoveries occur.

It will be generally agreed that prognosis is most difficult during the first three days of the disease—the very stage in which additional help, if required, should be given. Nothing would give a greater impetus to the employment of serum therapy than the establishment of prognostic criteria which would separate at an early stage the 15 or 20 per cent. of cases with an otherwise hopeless prognosis from the 80 or 85 per cent. destined to recover spontaneously. At present reliance must be placed upon clinical judgment of the patient's constitution and reserves and of the extent of the infection combined with a routine leucocyte count, but we must acknowledge that appearances can be deceptive. We have all seen the "apparently hopeless" case recover, and the "apparently favourable" case succumb.

The Essentials of Non-specific Therapy

Although it cannot be quantitatively expressed it is not to be doubted that symptomatic treatment helps recovery, and that good or bad treatment may make the difference between life and death. A warm but fresh and well-ventilated room and a good nurse are probably to be accounted of greater value to the patient than all other measures combined. The nurse's mission is to secure the maximum of rest and sleep with the minimum of interference; to supply adequate light nourishment; to attend to the mouth and skin without unnecessary movement or fatigue; to limit the visits of relatives; accurately to keep those records which are of such importance to the physician as indices of progress or deterioration; to preserve optimism; and to administer oxygen and certain drugs at appropriate times. A fussy nurse, too insistent on professional detail or appearances, or too partial to heated rooms and the pneumonia jacket, can do as much harm as her wiser colleague can do good. While most patients are happier propped high with extra pillows, individual requirements vary and the elevation can be overdone. Occasional tepid sponging is a part of the routine. A fluid or semi-fluid diet with fruit-juices and plentiful drinks and additional sugar or glucose is usually the best. Stimulants can frequently be dispensed with altogether if adequate fluid and sugar are taken, or alternatively may be reserved for the anxious days before the crisis. Hypodermic stimulants such as strychnine and adrenaline are, to my mind, of dubious value. They are often given rather at the dictation of anxiety than of necessity, and if they produce a physiological response on the part of the heart or blood-pressure is it not rather by dint of "flogging the tired horse" and too transitory in its effect to be a real boon? Digitalis is commonly given although it is still doubtful whether it has any virtue in the case of a regular tachycardia and embarrassed function due to fever and toxæmia. Brandy is a food as well as a stimulant and its utility in certain cases and stages is generally approved. Oxygen, preferably given continuously through a nasal catheter, is obviously justified in the presence of cyanosis. For sleep, when pain is slight or absent, Dover's powder with aspirin may be enough for some patients and in small doses is a useful combination in the case of children. Morphine should never be withheld during the earlier stages in the adult case where sleeplessness and pain are prominent complaints. One quarter of a grain should be the dose, a sixth being too frequently disappointing in its effect. A light flannel jacket or shawl over nightdress or pyjamas is sufficient covering. Heavy poultices, thick or tightly fitting vests and pneumonia jackets are to be avoided, but a light linseed or antiphlogistin poultice is grateful in the presence of pleuritic pain. So far as is consistent with careful observation the patient should be spared repeated examinations of the chest.

The Method and Results of Serum Therapy

These have been ably summarised by Cecil.[3] The method is based upon successful protective experiments with artificially infected monkeys. Felton's serum has the double advantage over previous preparations of being concentrated, so that smaller quantities can be given at a time, and of being less

toxic. The procedure, quoting Cecil verbatim, is as follows:—

"The patient is first questioned as to previous injections of horse serum, and as to history of hay-fever, asthma, or hives. An intradermal and a conjunctival test are then made with a 1 in 10 dilution of normal horse serum. If after 15 minutes these tests are both negative, 5 c.cm. of Felton's serum are slowly injected intravenously. If the patient shows no reaction to this first injection of serum, a second of 15 to 20 c.cm. is given intravenously from one to two hours later, and this dose is repeated every two to three hours until the patient has received approximately 100,000 units (equivalent usually to about 100 c.cm. of serum). The amount of serum administered on the following day is determined by the clinical condition of the patient. If his condition has improved and if his chart shows a decided drop in temperature, pulse-rate, and respiration-rate, the amount of serum administered is approximately one-half of that administered on the first day. If, on the other hand, the patient's condition is worse, or if it remains unchanged, the intensive treatment is continued. On the third day the same policy is pursued. If the patient's temperature is under 100° F., and if his condition is good, the general rule is to give one or possibly two 10 c.cm. injections to prevent relapse. We have found from experience that if any benefit is to result from serum treatment it is usually apparent after two or at least three days of treatment."

The difficulties and anxiety attending such a programme outside hospital require no emphasis. Even spacing out the injections to eight hours and giving larger quantities does not greatly simplify, and serum reactions, which are a genuine cause of apprehension, have not been wholly eliminated.

Treating alternate cases without preliminary typing, Cecil obtained a reduction of mortality from 36 per cent. to 28 per cent. in groups of cases numbering respectively 422 and 429. A reduction in the same ratio (provided all cases were seen early enough and considered suitable for serum) would convert the 16 per cent. Guy's Hospital mortality to 12 per cent., and the private practice 10 per cent., say, to 8 per cent.

Approximately two-thirds of all cases of lobar pneumonia are due to Types I. and II., and approximately one-third are due to Type I. infections. The mortality in Type I. cases has been reduced from 31·2 to 20·1 (Cecil) and from 30·9 to 16·6 per cent. (combined results of various investigators quoted by Cecil). In Type II.—the most virulent type—the results are less good, a reduction from 45·8 to 40·5 per cent. only being reported (Cecil), and from 37·7 to 24·6 per cent. (other investigators quoted by Cecil). The earlier treatment is instituted the better are the results. Cecil reports a reduction in mortality from 26·8 to 11·7 per cent. in Type I. cases treated within 72 hours of onset. I have seen no figures thus far which suggest that the incidence of complications such as empyema is influenced by serum therapy. Armstrong and Johnson [4] also state that complications and sequelæ are apparently uninfluenced by serum. The results obtained by the Scottish [5] and English [4] investigators, although their studies so far have been on a smaller scale, support the contentions of Cecil. All observers are agreed that there is an appreciable reduction in mortality and that early defervescence is more frequent among cases treated with serum. Similar claims, it is true, have previously been made on behalf of vaccine treatment and certain forms of drug therapy, but no such carefully controlled studies have been reported by their advocates. An unexpectedly early defervescence may also occur without specific therapy but hardly, perhaps, with the frequency observed in serum-treated cases. Finally, there is evidence for the specificity of Felton's serum in that the mortality of Type III. and Type IV. infections is not appreciably influenced by it. In other words, improvement depends upon something more than a "protein-shock" effect. Criticisms of the methods of control employed in the reported series could easily be advanced, for adequate controls in large scale human experiments of this kind are difficult to come by. Thus in the "alternate case" method it is clear that an accidental preponderance of cases of more favourable age and constitution in the treated group would lower the mortality appreciably. However, the factors influencing the liability to death or recovery in pneumonia are so numerous that precise analysis is impossible, and when various groups of reliable workers find essential agreement their opinions must be held worthy of acceptance.

Practical Difficulties of Serum Treatment

(1) These are firstly encountered in connexion with diagnosis, and particularly with diagnosis at a suitably early date. The doctor is not always called at the onset of the disease and two or three days must frequently elapse before he appears on the scene or before the diagnosis is certain. Typing requires a further 12 to 24 hours, even if a competent laboratory service be close at hand. Not all lobar pneumonias are pneumococcal and, although an abrupt onset, high fever, and rusty sputum are generally accurate tale-bearers, there are cases in which the differentiation of a pneumococcal from an "influenzal" or streptococcal pneumonia or a "mixed" broncho-pneumonia is none too easy. In recent years other types of pneumonia have been more common and pneumococcal pneumonia less common than formerly. Massive collapse in association with bronchitis, a comparatively benign condition, may also be mistaken for pneumonia.

(2) Even allowing that an early diagnosis is achieved and the case thought suitable for serum the necessary preliminaries and the frequent administrations of serum by the intravenous route must needs provide the busy practitioner with very real embarrassment. They may also be disturbing, both physically and mentally, to patients for whom we normally advocate the minimum of disturbance.

(3) In the case of a poor patient it must be decided whether to rely upon conservative treatment at home or to risk removal to a hospital where serum treatment can be instituted if the infection prove to be of appropriate type.

While grateful for new knowledge we must confess that it can greatly complicate judgment and practice. We would none of us willingly withhold a curative agent in an anxious disease, but while we know that there is, broadly speaking, a 4 to 1 prospect of spontaneous recovery and a 1 in 3 chance that the infection is of inappropriate type we may feel a pardonable disinclination to burden a patient with repeated doses of an intravenous remedy for an indeterminate advantage. On the other hand, we cannot put it from our minds that a certain small percentage of otherwise doomed cases may have the balance tipped in their favour by serum.

As an example of the judicial difficulties which may be encountered let me quote the case of a friend and colleague to whom I was called the day after hearing the arguments in favour of serum therapy set forth by its chief exponents.

The patient's age was 63; his life had been healthy and hardworking. On July 23rd he felt chilly and unwell. The next day he remained at work still feeling unfit. On the 25th he felt well again. On the 26th he had a rigor while out in his car, and that night his temperature was 102°. I saw him on the evening of the 28th—i.e., the second day from the rigor and the fifth from his first symptoms of infection—and found signs of pneumonia at the right apex and at the right root behind. Respirations 30. Pulse 108. General condition good. Leucocyte count 25,000 cells per c.mm. A small specimen of rusty sputum

was obtained. An attempt to type the pneumococcus by Armstrong's [6] direct method was unsuccessful, but the next morning it was reported as Type I.

On July 29th there was considerable restlessness with delirium, and enough cyanosis to justify continuous oxygen at night. On the 30th the left upper and lower lobes became involved. On the 31st he looked distinctly worse. Respirations 30–36. Pulse 110, with frequent intermissions. Breathing was embarrassed by meteorism, which was relieved by pituitrin and a turpentine enema. There was also severe pleuritic pain below the left nipple. By August 2nd (the seventh day after the rigor) the temperature had fallen to 99·6°; the respirations to 24, and the pulse-rate to 92. After steady improvement for a fortnight he began to get up, but then developed a dry pleurisy first at the right and then at the left base without any serious rise in temperature, and with a leucocyte count of only 9000. The pleurisy took some weeks to clear, but the case gave us no further anxiety.

Here were some of the difficulties. Should I regard the day on which the typing was complete as the third or the sixth day of infection? Accepting it as the third day, should I be influenced by the patient's age and the knowledge that he had a Type I. infection and give him serum? Or knowing him to be abstemious and of sound constitution, and comforted by the good leucocytosis, should I rely on the old expectant measures? I chose the latter course, not without heart searchings, but in the event justifiably. In two other cases which ended fatally I have criticised myself afterwards for withholding serum, although at the time I had reasons for my conservatism.

Conclusions

It remains to attempt advice in practical form. At present no unalterable rules can be laid down with regard to the indications for serum in lobar pneumonia. As in all therapeutic decisions the final plan must be based upon the particular state and requirements of the individual patient. The method is clearly, and (unless it can be simplified) must remain, more suited to hospital than home conditions. It is contra-indicated in children and adolescents for the most part, since the natural recovery-rate is so high in this age-period. It may reasonably be decided to dispense with it in advanced age when interference is ill-tolerated, and the disease frequently provides a blessed escape from infirmities. I should personally hesitate to employ it in any subject with known allergic tendencies, for I am doubtful whether the ill-effects of serum shock at the beginning or of serum sickness at the end of a pneumonia would be proportionately counterbalanced by the benefits of the treatment. In previously healthy adults showing a good initial response to infection and a high leucocytosis, I should feel justified in withholding serum. We are thus left with adult cases giving cause for undue anxiety at an early stage and showing a failure of leucocytosis; alcoholics might be included in this group. To these it should be justifiable to give an early dose of Felton's serum, and to continue the treatment if the organism is found to be of appropriate type. The treatment is more worthy of consideration in Type I. than in Type II. infections. At present these restrictions would seem to me reasonable in institutions where costs must be carefully counted, and in private practice. Expense prohibits the treatment of poor patients in their homes. In such cases the difficult decision of whether or not to counsel removal to hospital must be made. If the disease has passed its third day and adequate nursing and attention can be secured, I should usually prefer to keep the patient at home and to forego the possible advantages of laboratory study and serum therapy. Removal, if necessary, should be carried out within the first 48 hours.

While the employment of serum in pneumonia on a wide scale cannot be advocated, its claims cannot be overlooked. It is furthermore possible that a collective investigation of prognosis and a more critical search for special indications may serve to lighten the physician's burden of decision, to simplify his task, and to reduce a little further the comparatively low death-rate from pneumococcus Types I. and II. which obtains in this country among previously healthy persons. Of our 15–20 per cent. of deaths, be it remembered, a certain proportion occur among "bad lives" which are unlikely to be reclaimed by any treatment. Others again are due to infective strains against which we have as yet no potent serum. With a suitable card system observers in general practice might, I believe, greatly assist a collective inquiry into the matter of prognosis. It is to be hoped that hospital and laboratory workers will continue their studies of method and indications, and that the firms responsible for the supply of serum will find it possible to reduce the costs.

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RECURRENT PYOGENIC PAROTITIS

ITS PATHOLOGY, DIAGNOSIS, AND TREATMENT

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(WITH ILLUSTRATIVE PLATE)

DURING the past five years, in the course of investigating some 250 patients with diseases of the salivary glands, 19 cases of recurrent pyogenic parotitis have been under my care. They present many features in common, and the condition seems to be a fairly well-defined clinical entity. Formerly the more obscure inflammatory lesions of the salivary glands were ignored by physicians and surgeons alike, and their treatment has too often been only symptomatic. With recent methods of investigation much new information has been brought to bear on the pathology of recurrent parotitis, and treatment can now more often be carried out on a rational basis.

Recurrent pyogenic parotitis is characterised by recurrent swellings of one or both parotids, and even at times in the more chronic cases involving the other salivary glands. The saliva from the affected glands shows characteristic changes and sialograms show certain well-defined lesions. The name is admittedly inexact, but it does emphasise the recurrent nature of the inflammatory swelling. Considered more from the pathological standpoint the condition should be regarded as a mild chronic sialodochitis, with recurrent exacerbations which lead to attacks of acute parotitis. Typically these attacks are mild, but occasionally they may become really acute, though rarely going on to suppuration; whilst, on the other hand, in a few cases the condition appears to be more chronic from the outset. Though these are usually referred to as cases of recurrent parotitis the word "pyogenic" has been added for the sake of greater accuracy, since a clinical condition almost

indistinguishable from them may be the result of Mikulicz's disease.

CLINICAL FEATURES

Of the 19 patients in the present series no fewer than 16 were women; the average age at onset was 29, with 11 and 53 as extreme limits; and the average duration of the disease was nine years. In 9 cases the condition affected one parotid gland, in 9 cases both parotid glands, whilst in the remaining case the pathological process had started in both submaxillary glands and later spread to both parotids.

A few of the patients dated the onset of the condition to an acute dental infection or a dental extraction, to an acute infection of the upper respiratory tract, or to some other acute illness; but in most of the cases no such suggestive ætiological factor was put forward. In one case, a boy of 11, the condition followed an acute suppurative parotitis which had necessitated surgical drainage.

The disease usually begins insidiously with an occasional feeling of fullness in one parotid region. This soon gives way to a slight swelling of one parotid, associated with a feeling of still greater tension in the gland. Some patients have noted a tendency for the attacks to be started off by a meal, in which case the parotid swelling may reach a considerable size during the course of an hour or so, whilst in other cases there has been a tendency for very acid foods to start the attack. The gland may take anything from an hour or two to reach its maximum size, though as a rule this is reached in the course of about 24 hours. The swelling then persists for a variable period, sometimes tending to subside at the end of 48 hours, and sometimes lasting as long as six weeks. In a few cases the actual resolution of the attack is accompanied by the passage into the mouth—through the duct of the affected gland—of pus, or more often muco-pus, with a foul taste.

FIG. A

A patient with recurrent parotitis.

Between the attacks many patients are entirely free from symptoms; others complain of constant dull pain in the parotid region, whilst a few have persistent severe pain. Though, as mentioned above, an acute attack occasionally starts during a meal, it is unusual, between attacks, for these patients to suffer inconvenience during eating. A few of them learn in time how to avoid these more acute attacks by means of massage of the parotid; and this will be discussed later. The frequency of the acute attacks varies from one a year to one about every month.

With the passage of time there is an undoubted tendency for the other salivary glands to be involved in similar processes, and though in the present series unilateral parotid involvement was the rule at onset, in 9 cases the condition became bilateral, whilst in the case starting in the submaxillary glands the parotids were also eventually involved.

The sex-distribution of the condition is interesting; if the one post-operative case in the boy of 11 is omitted as not being a true "primary" case, then the ratio of females to males is eight to one. Many of the women patients showed a remarkable facial similarity, in the rather narrow and elongated type of head, in their sallow complexions, and in their general asthenic habitus. (Fig. A.) As a group they showed considerable nervous instability; several were inclined to outbursts of tearfulness, one was contemplating suicide, and one had a very severe form of mucous colitis. When one remembers the part played by the cranial autonomic system in the physiology of salivary secretion, it seems possible that these facts have a bearing on the disease.

FIG. B

The cells found in a catheter specimen of saliva during the quiescent stage.

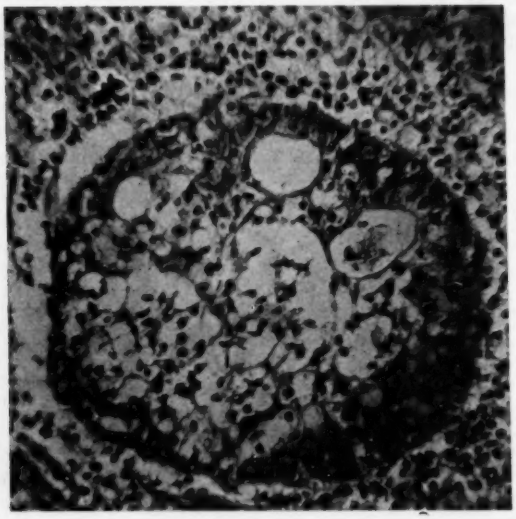
PHYSICAL SIGNS

It is necessary to consider the physical signs both during the quiescent periods and during the actual acute attacks. In the quiescent phase there may or there may not be visible fullness of the parotid region; this usually depends upon the duration of the disease, for the longer it has lasted the more certainly will a swelling be apparent. All cases, however, reveal on palpation some enlargement of the affected gland. In the normal parotid the exact anatomical limits of the gland are very hard to define on palpation, but in glands affected with recurrent parotitis the margins are always well-defined and rounded; the normal anatomical limits are not overstepped, but the gland consistence is firmer than usual, and there is slight diffuse tenderness. These are the characteristic physical signs, but in some cases, where the pathological process affects only one lobule of the gland, the changes may be confined to this, whilst in others of more chronic type, which have lasted many years, there may be areas in the parotid of a more local or lobular type of enlargement with variations in consistence. On the other hand, there may be diffuse enlargement of doughy consistence. Bidigitally there is at times

palpable thickening to be made out in the line of the parotid duct, whilst the orifice of the latter is usually normal. The changes found in the saliva are referred to later.

The actual exacerbations of the disease are in the first place due to some degree of blockage of the main duct, or of one or more of its larger branches, and upon the extent and nature of this the physical igns will depend. At first the condition is one of

FIG. C



Section of a duct of the parotid showing proliferative changes and surrounding round-cell infiltration.

retention of parotid secretion behind a blocked duct, usually the main one, which may be complete or incomplete; consequently the gland swells, and there is associated pain and tenderness. Depending upon the degree of obstruction of the duct and the degree of associated infection, there will be a tendency for the infection to spread upwards into the smaller ducts and into the glandular acini. Clinically this spread is associated with mild fever, moderate constitutional disturbance, and considerable pain, swelling, and tenderness of the whole gland—a condition of acute pyogenic parotitis in which the suppurative process is confined to the lumen of the ducts and acini. In the present series of cases only one went on to gross suppuration, which first formed a confluent parotid abscess and eventually burst through the overlying parotid fascia; but in many of the cases extensive suppurative lesions drained adequately via the duct into the mouth. Two patients showed marked œdema over the parotid region and outer part of the orbit, but this resolved without external suppuration. In such cases as these the swelling of the gland may overstep the normal anatomical limits. During the more acute attacks the orifice of the parotid duct in the mouth may appear reddened and œdematous, and it may be impossible to express any secretion without prolonged massage of the gland.

THE SALIVA

To make out the characteristic changes in the saliva of recurrent parotitis, it is essential, of course, that it should be obtained by means of a cannula direct from the parotid duct, and this is usually easy. Personally I always use a simple glass cannula, the point of which is drawn out to a width of 1 mm., with a fountain-pen bulb attached, similar to the one used for sialography. With this it is easy to collect saliva and to see at once its gross appearance.

Appearance.—In the more chronic cases the appearance is highly characteristic. Saliva from a healthy parotid duct is clear, and microscopically is free both from epithelial and pus cells. Saliva from patients with recurrent parotitis is faintly, or even markedly, turbid, and suspended in it are numerous flakes of somewhat spherical shape, the larger ones being 1 mm. or so in diameter. These are plugs of mucus and cells, and in reality represent rolled-up casts of the ducts of the parotid. The number and the size of these vary from case to case and in the same person during different phases of the disease. On the other hand, the relatively milder cases may show nothing more than the diffuse turbidity of the saliva.

Cells.—When the saliva so obtained is examined by means of a Gram film the plugs are found to consist of shreds of mucus in which are embedded masses of cells. These cells are of two kinds, pus cells and epithelial cells. In the more acute conditions the former are more in evidence, whereas in the more chronic cases the epithelial cells predominate. Of the epithelial cells a large variety of shapes are found, some being tall and columnar with basal nuclei, others flask-shaped or truncated, and many large and rounded with small central nuclei. (Fig. B.) This variety is accounted for by the fact that in a well-established case of recurrent parotitis there are almost certainly proliferative changes in the walls of the ducts, and the resulting epithelial cells tend to become rather irregular. At times large areas of epithelial cells are present forming a definite membrane or representing casts of the smaller or larger parotid ducts. In the more fluid part of the saliva similar types of cells may be found in smaller numbers.

Micro-organisms are not as a rule seen in large numbers in the Gram film during the quiescent stage, but some of the larger ovoid epithelial cells are always closely packed with ingested bacteria. Cultures made during this stage usually yield salivary streptococci, *Staphylococcus aureus*, or diphtheroids. Often more than one organism is present, but in one case in the present series a profuse growth of pure pneumococci was obtained. The exact nature of the micro-organism does not appear in practice to make a large difference to the resulting clinical or pathological picture.

Mucus.—Parotid secretion from a healthy gland contains only the merest trace of mucus. This is derived from small glands situated in the walls of the larger ducts and does not originate from the gland substance proper, the cells of which are entirely serous. In pathological conditions where there is catarrh of the ducts the amount of mucus secreted is largely in excess of the normal. The question as to how far this is a protective measure is referred to again later.

Ptyalin.—During health the normal ptyalin content of parotid saliva has been shown in a series of cases to vary between 500 and 5000, or even 10,000 units. In four cases of recurrent parotitis where this investigation was carried out the figures obtained were between 100 and 250 units, which suggests that as a result of the infective and obstructive processes the functional activity of the gland was seriously depressed.

SIALOGRAPHY

The investigation of these cases of recurrent parotitis by sialography, or the radiographic

demonstration of the ducts of the parotid with injection of lipiodol, has proved invaluable in determining the underlying pathological lesions. The technique of sialography has been described elsewhere.[1] It is simple and entirely free from risk if carried out during the quiescent phase, and in none of the cases investigated did it have any untoward effects. A normal sialogram is shown in Fig. I. (on Plate).

The pathological conditions as revealed by sialography fall in the main into one of the four following types :—

(a) *Globular.*—Certain of the cases show minute spherical dilatations at the tips of the finest ducts—that is to say, in the region of the glandular acini. (Fig. II., on Plate.) These dilatations are spherical in shape, variable in size, and rarely exceed 2 mm. in diameter. This process, which I have referred to as "bronchiectasis" of the parotid, may affect the whole of the organ, or only one or more of the gland lobules. Its degree may vary on the two sides and in different cases. At the same time it should be noted that in the type of case showing these pathological changes there is little or no abnormality to be made out in the configuration of the larger ducts of the gland.

(b) *Fusiform.*—In these cases the main brunt of the lesion has fallen upon the larger and the medium-sized ducts. These ducts lose their regularity and show along their course fusiform dilatations. (Fig. III., on Plate.) In an early stage these may be comparatively small and rather irregular, whilst in an advanced condition each dilatation may be about half an inch long and a quarter of an inch wide, and more regular. This condition is never seen in the ducts towards the periphery of the gland.

(c) *Segmental.*—This condition is closely allied to the preceding, and it also affects the medium or larger ducts. These ducts, whilst preserving their general course, show a rather regular series of segmental dilatations, superimposed upon which is often some degree of tortuosity, the whole suggesting an effort to overcome obstruction. (Fig. IV., on Plate.) Again this lesion may affect one part only of the duct system.

(d) *Destructive.*—A fourth type of change may at times be made out in those cases where the recurrent exacerbations have been comparatively severe, and have gone on to gross suppuration inside the parotid capsule, with destruction of glandular tissue and ducts, followed by fibrosis and scarring. (Fig. V., on Plate.) In these cases the normal regular branching tree of the parotid duct system disappears and is represented by a small number of rather irregular ramifications of the finer ducts. Associated with this there may be some dilatations of the ducts and acini, usually of somewhat irregular type.

The explanation of the above variations in the radiographic picture is, apart from the destructive type, somewhat obscure. Why in one case of recurrent parotitis the brunt of the lesion should fall on the finest ducts, and in others upon the larger ducts, with the production of fusiform or segmental dilatations, is at present unknown.

As regards the submaxillary salivary gland, the only pathological condition met with in this series has been extreme dilatation of the larger ducts (Figs. VI. and VII., on Plate); nothing at all comparable to the changes seen in the parotid has been found.

ÆTIOLOGY AND PATHOLOGY

In some of the cases under consideration the commencement of the parotitis dates from an acute dental infection, a severe tonsillitis, or a sinus infection. At times the commencement of the use of dentures or neglect to keep these adequately cleaned has been responsible. The case following acute suppurative parotitis which had been drained externally has been referred to. Compared with the submaxillary salivary gland, the parotid is much more prone to acute pyogenic infections, the former being affected usually only in association with the presence of calculi. This peculiarity has led to a considerable amount of experimental work and the formulation of various hypotheses. It is certain that practically all forms of acute and subacute pyogenic parotitis are ascending infections and that blood-borne infections are almost curiosities. It is furthermore certain that in the post-operative buccal conditions which predispose to ascending infection of the parotid there is a marked exaltation of the number of micro-organisms in the region of the orifice of the parotid ducts as compared with the number in the region of the orifices of the submaxillary ducts in the floor of the mouth. The work in this connexion has been carried out by Prof. Seifert.[2] The explanation is said to be that the secretion of the submaxillary gland is particularly rich in mucus, whilst parotid secretion is almost free from it, and, as is known, mucus has a strong bactericidal action. Once catarrh of the parotid duct has occurred there is a tendency for it to persist and to give rise from time to time to attacks of subacute parotitis. The mucus secreted is in excess of the normal; duct cells are proliferated and eventually shed; and the combination gives rise to the plugs of muco-pus which cause duct obstruction with retention of secretion. Once this has happened bacterial infection can ascend through the stagnating saliva and produce the various stages of parotitis, unless the obstruction is relieved. Furthermore, on account of the extremely delicate nature of the ducts of the parotid the condition, once established, tends to pass into a vicious circle. Duct dilatation in varying degree results from the recurrent attacks of infection and duct obstruction.

The nature of the micro-organisms has already been referred to. If in these cases there is any gross cause of sepsis in the mouth there will be increased numbers of micro-organisms there to cause further ascending infection.

As regards the histology of the condition, very little in the way of accurate observation has ever been carried out. Only in one case of the series was there any justification for carrying out a biopsy. This was a case early in the series, with a typical history, but the physical signs suggested that there might possibly be malignant disease of the parotid. The section showed a parotid duct in which marked proliferation of the epithelial lining had occurred, partially obliterating the lumen of the duct. (Fig. C.) Outside the duct there was an extensive round cell infiltration. In view of the large numbers of epithelial cells which are constantly found in the saliva of these patients, it is almost certain that a great deal of proliferation of the lining membrane is going on.

INVESTIGATION AND DIFFERENTIAL DIAGNOSIS

The accurate diagnosis of recurrent pyogenic parotitis depends upon a careful history and a thorough examination of all the salivary glands, their ducts, and their orifices. A catheter specimen of saliva should be collected from the affected gland (it is not always possible to do this in the case of the submaxillary glands), and this should be examined for its cytology, bacteriology, and ptyalin content. Skiagrams of the affected region should then be

taken, which in the case of the submaxillary should include both intra- and extra-oral films, to exclude—though not necessarily absolutely—the presence of a calculus; and finally sialography should be performed when practicable to determine the site and severity of the pathological lesions of the ducts, and to serve as a guide to treatment. In all cases a complete blood count and a Wassermann reaction should be carried out. The following are the more important conditions which have to be differentiated from recurrent parotitis.

(a) *Mumps.*—Many of the patients in the present series had, in their initial attacks, and even in two or three of their subsequent attacks, been diagnosed as suffering from mumps. In this connexion certain points should be borne in mind. Firstly, a diagnosis of mumps in an adult should not be made too readily without a history of contact. Secondly, in a doubtful case of mumps a catheter specimen of parotid saliva will not show the catarrhal changes of recurrent parotitis, though it may show a few cells. Finally, for practical purposes recurrent attacks of mumps are unknown, and this diagnosis should never be made without excluding the possibility of recurrent parotitis.

(b) *Stone.*—A typical case of parotid duct calculus gives a characteristic history of a meal-time swelling with subsidence of the swelling, or almost complete subsidence, between meals—a state of affairs which is never seen in recurrent parotitis. When, however, infection is superimposed upon a small calculus, then the clinical picture may approximate to that of recurrent parotitis. In all cases, therefore, skiagrams are essential to exclude calculus, and in addition sialograms in the latter may localise a doubtful duct obstruction.

(c) *Mikulicz's Disease.*—When more than one salivary gland is involved in the process the question of true Mikulicz's disease may be raised. By this is meant a familial or acquired disease affecting one or more of the salivary glands, usually all of them more or less symmetrically, together with the lacrymal glands, in which pyogenic infection, calculi, uveoparotitic polyneuritis, thyroid disease, blood diseases, lymphosarcoma, lead or other poisonings, syphilis, tubercle, and lymphadenoma have been excluded. In true Mikulicz's disease the saliva contains no evidence of any duct catarrh, and the sialograms are normal. At the present time I have under my care a patient who gives a history which would do for that of a recurrent pyogenic parotitis affecting both parotids and submaxillary salivary glands, but in whom there is no evidence that the condition is of bacterial origin. There is no sign of duct catarrh, the sialograms are normal, and the diseases enumerated have been excluded.

(d) *Uveo-parotitic Polyneuritis.*—This rather rare condition is associated with peripheral neuritis, inflammation of the uveal tract, and parotitis. As, however, the parotitis may sometimes, though not usually, be the initial manifestation, and one parotid may be affected after the other, with a tendency at times to recrudescence, the condition must not be forgotten.

(e) *Pre-auricular Lymphadenitis.*—A clinical condition which may occasionally cause some confusion is a recurrent form of lymphadenitis in the pre-auricular lymph glands. This confusion is the more possible because these lymph glands may be partly superficial to and partly deep to the capsule of the parotid gland. The inflammation is usually a chronic pyogenic one, in which case some cause is likely to be found within the drainage area of the glands; or occasionally the condition may be a tuberculous adenitis. In two cases of the present series recurrent bilateral pyogenic parotitis existed side by side with chronic pre-auricular lymphadenitis, for which there was an obvious cause.

(f) *Mixed Parotid Tumour.*—When recurrent parotitis affects only one lobule of the gland the physical signs may simulate a mixed tumour, but the other investigations should lead to an accurate diagnosis.

(g) *Malignant Disease of the Parotid.*—In the very chronic form of recurrent parotitis which has lasted many years, particularly if there has been a considerable amount of "destructive" suppuration, the physical signs may closely simulate malignant disease. Again the accurate diagnosis may rest with the special methods described.

LEGENDS TO ILLUSTRATIVE PLATE

FIG. I.—Normal sialogram of right parotid gland.

FIG. II.—Sialogram of right parotid showing globular type of dilatation. Some lipiodol remaining in the left parotid gland is also seen in the anterior part of the picture.

FIG. III.—Sialogram of left parotid showing fusiform type of dilatation.

FIG. IV.—Sialogram of the left parotid gland showing a segmental type of dilatation of the main duct and a similar change in the ducts corresponding to the socia parotidis.

FIG. V.—Sialogram of right parotid showing destructive type of lesion.

FIG. VI.—Normal sialogram of right submaxillary gland.

FIG. VII.—Left submaxillary sialogram from a patient with recurrent infection of the parotid and submaxillary glands.

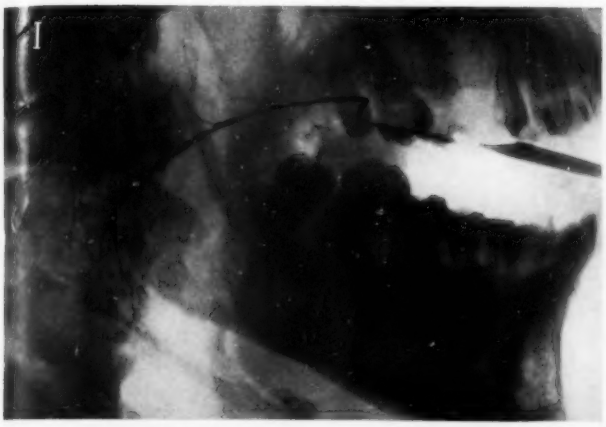
TREATMENT DURING THE QUIESCENT STAGE

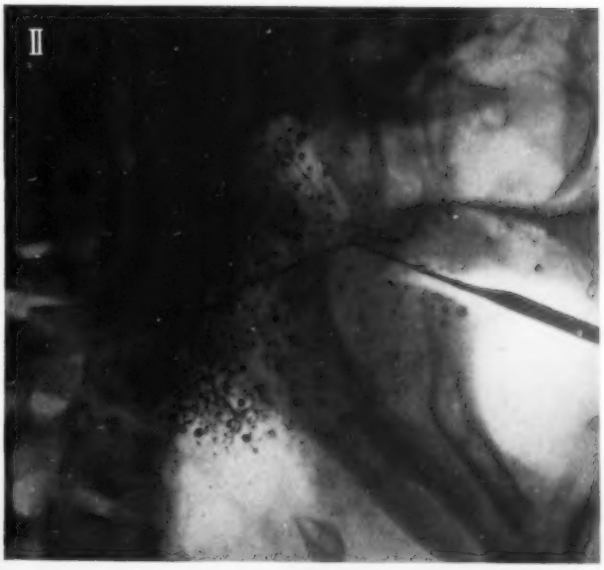
If it is borne in mind that recurrent parotitis is due to recurrent obstruction of some part or parts of the duct system, associated with mild pyogenic infection, it will be at once seen that the first principle of treatment is to keep the ducts of the parotid patent, and to keep the region of the duct orifice in the mouth as free from infection as possible. Infection leads to epithelial desquamation in the ducts, together with a marked increase in the mucus content of the saliva, and this combination leads to the production of plugs of muco-pus which cause obstruction and retention of secretion, and pave the way for ascending infection. During the quiescent stage treatment must be directed to the avoidance of a fresh entry on the vicious circle. The following are the more important lines of treatment.

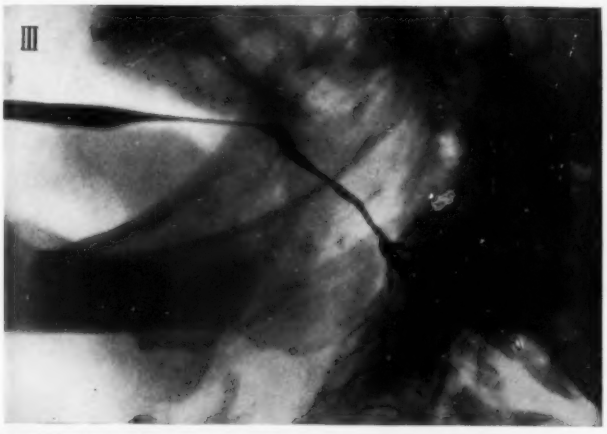
Infections.—Any obvious cause of sepsis in the mouth, particularly in the region of the affected parotid duct, should certainly be dealt with. Especially is this true of infected teeth. At the same time a scrupulous hygiene of the teeth and mouth should be insisted upon. In some cases I have seen the condition has certainly been aggravated by the dirty state of the patient's dentures, and if these are ill-fitting they may sometimes press on the buccal part of the duct.

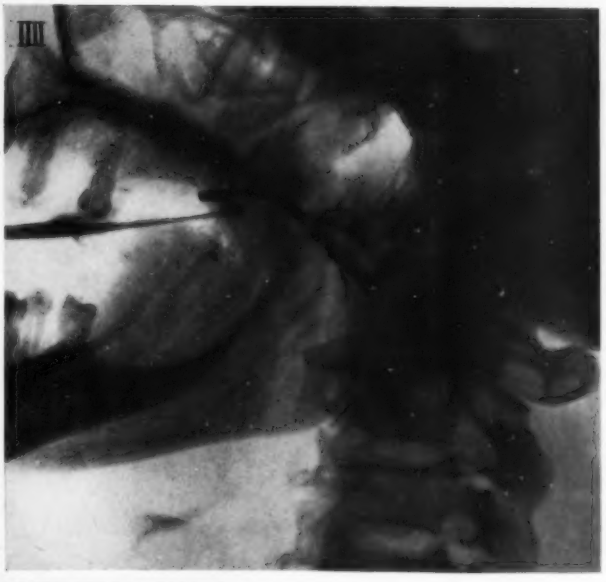
Massage of the parotid is by far the most important single item in the line of treatment. If duct obstruction can be avoided, then one can certainly say that the development of recurrent attacks of parotitis will also be avoided. In this connexion I have shown by means of lipiodol injections of grossly diseased parotids that it is possible to empty the main duct

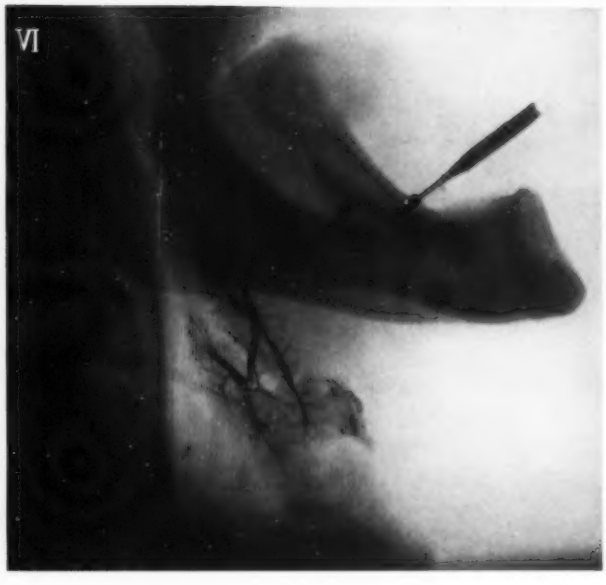
MR. PAYNE: RECURRENT PYOGENIC PAROTITIS



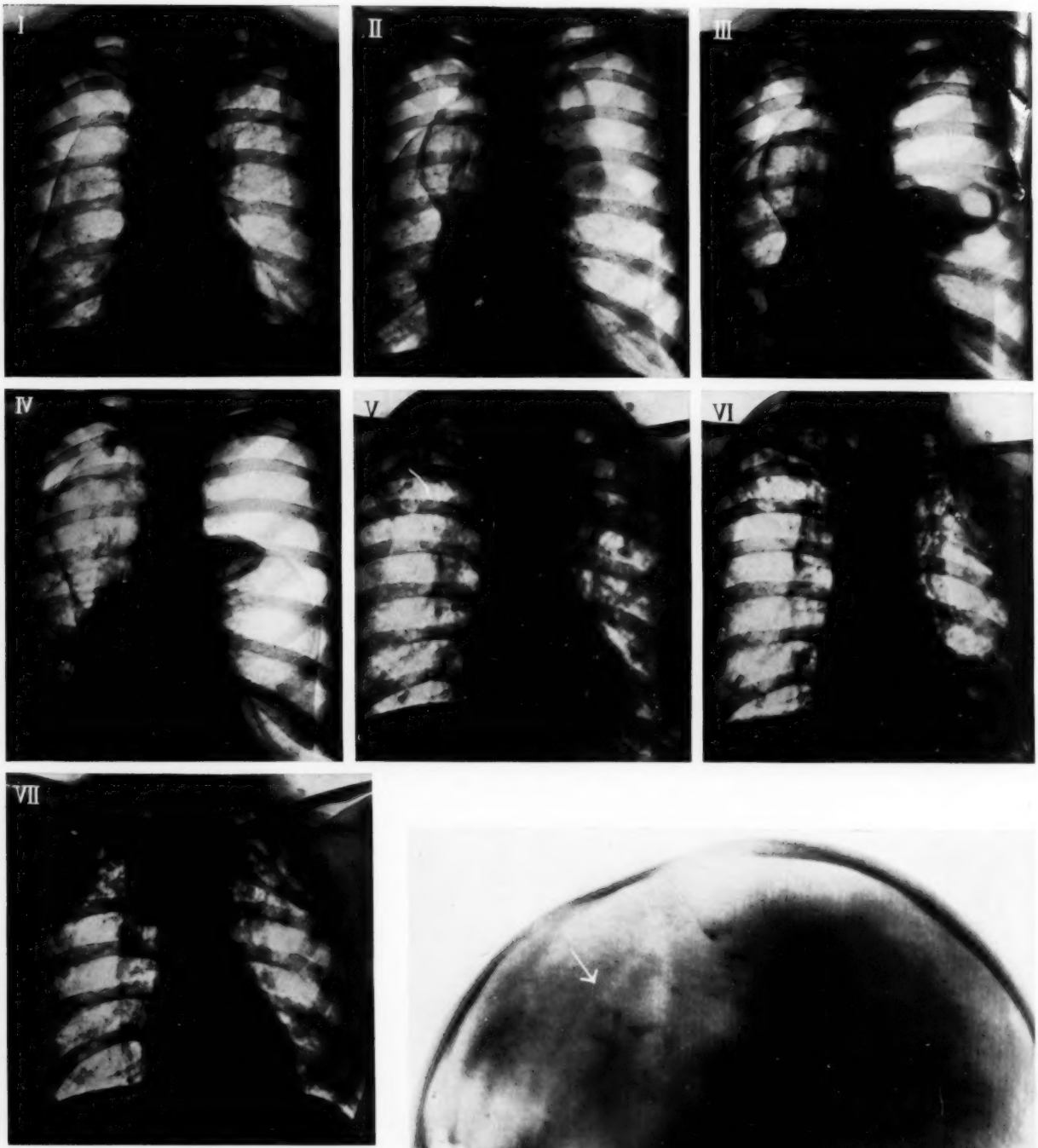








DR. GRAVESEN: SELECTIVE LUNG COLLAPSE



DR. ALLEN: CASE OF NÆVOID AMENTIA

Radiogram of skull showing crescentic shadows due to calcification in nævoid lesions in the meninges.

and its branches after even a few seconds' massage of the gland. Patients, therefore, should be instructed to carry out prophylactic massage of the parotid. This massage should always be directed from behind forwards towards the angle of the mouth starting from three points—the tragus, the lobule of the ear, and just behind the angle of the jaw. It is most efficiently carried out by the thumb, and it should be demonstrated to the patient with instructions to carry it out for at least five minutes night and morning.

Diet.—In addition to the above, many patients are helped by making them start the day by taking the juice of half a lemon in a little water in order to cause an intense flow of saliva after the possible stagnation during the night. This should be done immediately after massage. At this point I may mention that some patients wake up in the morning with the parotid swollen on the side on which they have slept. Whilst the diet does not usually need alteration it should be impressed upon the patient that since thoroughly efficient mastication is the greatest single factor in the production of the normal flow of saliva, they should take their food rather dry and chew it very thoroughly.

Operations.—Operation is but rarely necessary in the treatment of recurrent parotitis, but it may be indicated where the condition is severe or where it has failed to respond to other treatment carried out efficiently. It may consist in: (1) dilatation of the parotid duct; (2) slitting the orifice of the parotid duct, followed by dilatation; or (3) avulsion of the auriculo-temporal nerve. Dilatation of the parotid duct alone is not often of much value, since the orifice usually contracts quite rapidly after cessation of the dilatation. Slitting the orifice of the duct into the buccal portion can be carried out under local anæsthesia, and when it is followed by regular dilatation until healing is well established a wide patulous opening persists. Avulsion of the auriculo-temporal nerve is not as a rule either serious or difficult. It leads, of course, to paralysis of parotid secretion through destruction of the nerve-supply. Its use should be reserved for the more intractable cases.

Radiotherapy.—In the present series of cases X rays have been used on only two patients. One of these had been subjected to a prolonged course of treatment before I saw her, but without any obvious benefit. In the other case X rays were given with a temporary good result; but in neither were the previous observations sufficiently accurate to warrant deductions. It is further a moot point whether in these cases X rays do good by clearing up the infection and catarrh or by leading to atrophic changes in the glands. I am at present investigating the effect of small doses of X rays in a series of patients with proved recurrent parotitis. Sialograms have been taken, and the saliva has been examined for cells and organisms, and for its ptyalin content. After treatment is completed these investigations will be repeated and considered in relation to the clinical picture.

TREATMENT DURING EXACERBATIONS

During the actual exacerbation of the disease there is always either complete or partial obstruction of some portion of the duct system, often the main duct. Immediate treatment thus consists in the relief of obstruction, and is identical with that which should be undertaken from the outset in any case of acute pyogenic parotitis, whether recurrent or not.

The surgeon should first of all satisfy himself that the main duct is patent, as shown by the efflux of pus or muco-pus on massage of the parotid, and as much as possible should be expressed at once from the gland and ducts by this means. The patient should then be instructed to repeat the massage before and after each meal, and first thing in the morning and last thing at night. The diet again should be as solid as possible. Frequent hot mouth washes will help to keep the mouth clean and soften secretion in the duct. For the pain, the face should be bandaged over wool, and a rubber hot-water bottle applied, which will also tend to hasten resolution. It is far better in these cases to avoid all forms of external moist heat, which will only tend to make the skin sodden, and perhaps accentuate any tendency to external rupture.

With the above measures it is in general possible to tide a patient over the acute exacerbation, and when treatment is undertaken energetically the condition usually begins to subside after 36 or 48 hours, the saliva gradually becoming clearer and less purulent. If, on the other hand, it is impossible to get the duct working by massage when the case is first seen, or at any rate after the first 24 hours, further measures are essential if gross suppuration is to be avoided. In these cases it is sometimes possible by probing the duct, or by aspirating it with a cannula, to dislodge some of the muco-purulent plugs. At the same time in the more severe cases the duct orifice may be slit up for about three-quarters of an inch. The treatment of gross suppurative parotitis which demands external operative measures falls outside the scope of this paper.

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DR. GRAVESEN: LEGENDS TO ILLUSTRATIONS ON PLATE

FIG. I.—Female, aged 26. Treated with right-side artificial pneumothorax for four years. Readmitted with a cavity in left apex near mediastinum. Tubercle bacilli present.

FIG. II.—Same case after induction of bilateral artificial pneumothorax. The apex cavity of the left lung is seen hanging in a stretched adhesion, hindering the collapse of the upper lobe.

FIG. III.—Same case immediately after cauterisation of the adhesion. The cavity has dropped into the middle of the artificial pneumothorax.

FIG. IV.—Same case three months after the cauterisation. The left-side artificial pneumothorax has changed into a selective one like that on the right side. No bacilli found.

FIG. V.—Female, aged 27 (the case mentioned at the end of the paper) with bilateral apical cavernous affection.

FIG. VI.—Same case after left-side apical thoracoplasty. (Carried out in January, 1931.)

FIG. VII.—Same case after bilateral apical thoracoplasty. (Operation on right side April, 1931.)

AIR PAGEANTS FOR HOSPITALS.—It is proposed that between April and October next British Hospitals Air Pageants should give 200 displays in various parts of Great Britain to raise money for local hospitals. The demonstrations will be led by Mr. C. W. A. Scott, who made the record flight from England to Australia. The proposal has the support of the British Hospitals Association.

SELECTIVE LUNG COLLAPSE IN BILATERAL DISEASE *

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(WITH ILLUSTRATIONS ON PLATE)

During recent years attention has been drawn more and more to the problem of selectivity in the use of collapse therapy. This therapy is increasingly accepted as the treatment "par excellence" for pulmonary cavities. Its object is now to establish sufficiently effective conditions for closing cavities and at the same time to secure the least possible interference with the function of the lung as a whole. It is on these lines that the idea of selectivity in collapse therapy is to be understood and carried out.

The adoption of this new principle considerably increases the scope of collapse therapy. It is true that it involves a more exacting demand for individual treatment. Both in artificial pneumothorax and in operative treatment it abolishes routine and uniformity of technique. To use lung collapse in accordance with the demands of selectivity it is necessary to work out a new plan for each individual case, and to carry out this plan in close reference to the particular conditions. Thus, this new idea can only be materialised at the cost of more intensive work and more exact touch with individual conditions. On the other hand, its advantages can be so great as fully to repay the greater trouble.

These advantages are a considerably reduced risk and a more assured result than when collapse therapy is used as a mere matter of routine. The possibility of saving as much as possible of the pulmonary function justifies an early application of the treatment in those cases of limited cavernous affections in which the surgeon is most apt to postpone intervention until he sees whether spontaneous healing or progressive destruction will take place. In such cases time is often wasted, and when at last the collapse is applied more radical measures are found to be necessary. An early use of selective collapse may often mean a short cut in the treatment. In more advanced affections, where the indication is beyond all doubt, there is no less advantage in saving as much pulmonary tissue as possible fit for function.

Even in unilateral cases the idea of selectivity is therefore of great value, but one of its special advantages is the possibility of extending the methods of collapse to cover not only unilateral—or chiefly unilateral—cases, but also cases where bilateral cavernous affection is present.

THE METHODS OF OBTAINING SELECTIVE COLLAPSE

In this connexion, as in many others, the example to follow is given us by Nature. The spontaneous healing of a limited affection often takes place through a retraction which causes the slightest possible damage to the rest of the lung tissue. We can observe how the affected part of an upper lobe gradually withdraws itself, the lobe being folded together like a fan towards the upper part of the mediastinum. When a lung under artificial pneumothorax treatment re-expands, the healthy parts fill up the pleural cavity while the affected part is kept behind by the retractive process of the tissue. This means that the selective effect of an artificial pneumothorax is provided by the natural tendency of retraction within the lung tissue itself. A selective pneumothorax is one that is kept refilled only as much as is sufficient to keep the affected part collapsed while the rest of the lung is more or less expanded.

In the earlier stages this principle demands smaller refills at shorter intervals than in ordinary artificial pneumothorax work. Also, more frequent revision by screening is needed in order to keep the lung in an ideal stage of selective collapse. Later on, when the pleura has become stiffer and the healthy parts of the lung adhere to the chest wall in an expanded condition, the continuation of the selective artificial pneumothorax will, as a rule, be as easy to maintain as a complete one, the refills being done at longer and longer intervals. In this way it is often possible to continue an artificial pneumothorax for several years on a gradually decreasing scale, the refills becoming smaller and less frequent, until at last the treatment is discontinued, provided that the cavity has not reopened under the slow gradual re-expansion.

ADHESIONS

The presupposition for such ideal management is, however, that there are no adhesions. Adhesions, as a rule, counteract the selectivity of an artificial pneumothorax. That does not mean that the effectivity is always hindered; by positive pressure the collapse of cavities may be obtained in spite of adhesions. But the adhesions are apt to make the artificial pneumothorax contra-selective. They compel us to collapse the healthy parts of the lungs much more than the size and localisation of the cavities indicate. The adoption of selectivity therefore means a greater use of intervention against adhesions. Where these are accessible, cauterisation has a larger field of indication. Nowadays adhesions are cauterised, not only when they cause the persistence of sputum and bacilli, but often merely because they prevent the selectivity of the artificial pneumothorax. When it is probable that a cauterisation will enable the healthier parts of the lung to attain a better function and will secure more ideal conditions for a gradual re-expansion of the affected parts, cauterisation is indicated even if the artificial pneumothorax has been clinically successful. Not only is the same result sometimes attained by less reduction of pulmonary function, but also the later re-expansion of the lung may be safer than if a stretch of adhesion has been allowed to counteract the selectivity of the collapse.

Broader surface adhesions still more greatly prejudice both efficiency and selectivity. It is common for an artificial pneumothorax to bring about complete collapse of a healthy lower lobe, while the affected upper lobe is kept more or less expanded by adhesion to the dome of the pleura. We often doubt whether it is of any use at all to maintain this condition. Now and then a good clinical result is obtained, but often at the expense of severe encroachment upon the respiratory functions. Here the principle of selectivity makes us proceed earlier than formerly to a replacement of the contra-selective artificial pneumothorax by a local operation, an apical thoracoplasty, or an apicolysis, after which the lower lobe is allowed to re-expand for continued function. In the less frequent case of an affected and adherent lower lobe and a partial artificial pneumothorax upwards, the artificial pneumothorax may be wholly or partly replaced by a phrenicectomy, after which the healthy upper lobe may be left for re-expansion.

In cases of more or less general adhesion, making artificial pneumothorax impracticable, the selectivity

* Paper read before the Tuberculosis Association in 1932.

of collapse is carried out by a keen individualisation of operative technique. The total thoracoplasty which is still adhered to by many schools as a matter of routine ought nowadays to be reserved for total destructive affection of a lung and for total empyema. In more limited cavernous affections it should be our aim to change the shape of the lung—and the thorax—to an extent that corresponds as closely as possible to the extension of the disease, and no more. Why should the whole of a lung be permanently excluded from function for the sake of a quite limited cavernous process of the apex? But there is still much opposition in certain quarters to partial thoracoplasties. The old ideas about the risks involved have handicapped development. The risks are there, but they can be neutralised by proper technical improvements. The risk of aspiration can be checked by a technique of anæsthesia and after-treatment which effectively counteracts any tendency to aspiration. The risk of missing the effect can be met by an operative technique which is built upon a thorough experience of the parts of the chest wall which it is most important to attack.

In such thoracoplasty it is necessary to work out the plan of operation which is best suited to the individual case. Most frequently the affection is apical, and special methods have been worked out to deal with these. Coffy has published his method of resecting the upper two or three ribs through an incision in the lateral region of the neck. Von Graf has suggested a more convenient and more adaptable way of attacking the upper ribs from behind. The different methods of apicolysis, plugging, and phrenicectomy have attained a wider scope in providing an operative collapse on strongly selective lines. This is not the moment for a discussion of the relative merits of these various methods—indeed, no general rules can be laid down in the matter of choice. We have to choose in each individual case the method, or constellation of different methods, which is most likely to produce the conditions required by the cavity or cavities present.

In one particular respect selectivity in thoracoplasty work has meant an appreciable advantage in technique. Partial operations can practically always be carried out in one stage. Since the introduction of selective thoracoplasty the necessity of two-stage operations has been reduced to a minimum, which, of course, goes far to reconcile patients to the operation.

THE USE OF BILATERAL COLLAPSE

Obviously, when collapse is indicated on parts of both lungs, it should be applied on selective lines. We must realise, however, that these cases have a particularly gloomy outlook. The presence of tuberculous cavities in one lung renders the prognosis serious enough; when both lungs contain cavities the way is, as a rule, barred for any kind of conservative treatment, even if the affections remain temporarily quiescent. Any result, even a relative one, that can be obtained by active intervention must therefore be welcomed as pure gain, and results have already been observed which justify the occasional adoption of bilateral intervention in cases where unilateral collapse has hitherto been contra-indicated.

Bilateral artificial pneumothorax has been in vogue for several years. Contributions to the subject fill the columns of most tuberculosis periodicals. It can be said to have passed its experimental stage and is now enrolled among the effective—or at least relatively effective—measures against bilateral tuberculosis.

Alternating artificial pneumothorax was tried for many years. Saugman was one of the first to make the attempt, as early as 1908. During several years he treated a series of cases alternatively on the two sides. His results were very discouraging; they were permanent in only 1 case out of 11. Other workers have had similar experience. Better results were only obtained when the bold step was taken of establishing the bilateral artificial pneumothorax simultaneously. The reasons for the improvement can now be seen. In the alternating method the more advanced lung was taken under treatment first, and during this treatment the other lung got worse. This often caused a discontinuance of the first artificial pneumothorax too early, and at the same time it provided a less satisfactory prospect for the second. By simultaneous application we can now, to a certain extent, avoid this twofold embarrassment; each lung can be treated at the time when indication is present, and the treatment can be continued for the length of time suitable for each. So far, the indications and technique of bilateral and unilateral artificial pneumothorax are not very different. The problem is just how to manage each of the bilateral collapses as if it were a unilateral one, and this problem is solved when the principle of selectivity can be made effective on both sides.

Special attention must be paid to a scrupulous technique in induction and refills. Any lung lesion produced by the needle may be twice as dangerous as a similar one in unilateral collapse. A tension-pneumothorax is a serious complication which in unilateral cases may be fairly easily managed, but in bilateral cases it is extremely dangerous. It has happened once at Vejlefjord Sanatorium, and the patient nearly died, but we succeeded in saving her with a good result. This experience made us abolish needles with side-opening for the refills in bilateral cases. The point of this needle will always go a little deeper than its opening, and an artificial lesion of the lung is therefore more likely to take place than when an ordinary needle, open at the end, is used.

Cauterisation is practicable even when bilateral artificial pneumothorax is established. It is only necessary to prepare for the operation by temporarily enlarging the artificial pneumothorax in which a stretch of adhesion is present, and correspondingly diminishing the other one. After the operation the refills are so continued as to re-establish a more just apportionment of the collapse. It has even proved possible to cauterise on both sides at different phases of the treatment.

COMBINATIONS OF METHODS

A more complicated state of affairs arises when artificial pneumothorax cannot be selectively managed on either one or both sides. We are further handicapped by the fact that the more affected lung is generally also found to be the more adherent. And yet, if a fairly good general condition is preserved and other circumstances encourage us to do something active instead of leaving the patient to his more than doubtful fate, a combination of operative treatment on one side and artificial pneumothorax on the other, or of bilateral operative measures, presents itself for consideration. Again, no general rules can be given for such combination. There are many different constellations for obtaining selective collapse by one or another operation on one side, selective artificial pneumothorax on the other, or by bilateral selective operations. But in this respect,

as in all medical work, our aim must be *nil nocere*. It should not be forgotten that in this work we are moving on the edge of a precipice. On the other hand, the experience gained in bilateral artificial pneumothorax has proved that a comparatively large portion of the lungs can be excluded from function—temporarily and even permanently—without any immediate danger, and with less discomfort to the patient than one would suppose. We may well make use of this experience provided that we observe sufficient caution, not approaching too closely the limits which in artificial pneumothorax are found to be safe. Operative measures demand more general strength in the patient and more reserve power of function than does artificial pneumothorax, and the changes produced by operative intervention are permanent, and cannot—as can the artificial pneumothorax—be regulated to a more reduced scale.

It has proved possible to combine artificial pneumothorax on one side with phrenicectomy, plombage, or even partial thoracoplasty on the other. A bilateral phrenicectomy has been carried out with a relatively good result and without any serious disturbance of function. Other cases have been published.

BILATERAL PARTIAL THORACOPLASTY

For several years we have at Vejlefjord Sanatorium contemplated the possibility of performing partial thoracoplasty bilaterally. Theoretically this idea should be justified when limited cavernous affections are present in both apices, and general adhesion prevents artificial pneumothorax on either side.

The first case fulfilling the required conditions, a young woman, was admitted in the summer of 1930. The patient had a cavity the size of an orange in the right apex and one the size of an egg in the left apex. Artificial pneumothorax was impracticable on either side. With the intention of performing a bilateral apical thoracoplasty the right apex was operated on. This operation, however, was complicated by a severe hæmorrhage when the first rib was cut. The bleeding was successfully checked, and she survived the operation, but died four weeks later from a tuberculous pneumonia in the right lower lobe.

The next patient of this type, also a young woman, was admitted in the autumn of 1930. In the left apex there was a cavity about the size of a duck's egg, and in the right apex a cavity about the size of a plum. Artificial pneumothorax was tried on the left side, but was found impracticable. With a subsequent artificial pneumothorax of the right lung in view, a selective thoracoplasty was performed in January, 1931, on the left side, with resection of the upper six ribs. When the patient had picked up after this operation, artificial pneumothorax was tried on the right side, but here too it failed on account of synechia. Three months after the left-sided operation, in April, 1931, a thoracoplasty was performed on the right upper lobe, of the same extent but with less radical resections than on the left side. After both operations, but especially after the second, the patient showed symptoms of threatening œdema of the lung, but she got over this and has ever since made considerable progress. Whereas she had been running more or less fever for about one and a half years before the operations, the temperature has kept normal ever since. The expectoration, which had been rather copious, decreased to about 10 c.cm. a day, still, however, containing tubercle bacilli. Her mobility after the operations has been satisfactory and she has not suffered to any serious extent from dyspnœa.†

As far as can be gathered from the available literature, this is the first case of bilateral thoracoplasty yet published. It was performed exclusively on the basis of experience with other bilateral interventions, especially artificial pneumothorax. It has proved that bilateral selective thoracoplasty is possible, and that this active treatment can yield a result which, relative to the previous development and prognosis of the disease, may be considered decisive.

† During the past year she has made constant progress, and tubercle bacilli are now absent from the sputum.

THE TREATMENT OF TUBERCULOUS CAVITIES OF THE LUNG

By L. S. T. Burrell, M.D. Camb., F.R.C.P. Lond.

PHYSICIAN TO THE ROYAL FREE HOSPITAL AND TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

Tuberculosis of the lung begins as a small area of infiltration. This may heal leaving no damage or, at the most, a small scar which does not affect the health of the individual and is unsuspected, but may be found accidentally many years later at post-mortem examination. On the other hand, the infiltration may spread and lead to caseation and necrosis of the lung tissue. Even then healing may occur by the formation of fibrous tissue, but it often happens that the necrotic lung breaks into a bronchus and leaves a cavity. The walls of this cavity are composed of necrotic tissue through which other caseous masses may break, so that the cavity increases in size, and in rare cases the whole of a lobe may be converted into one large cavity. More commonly in a chronic case there are several cavities not directly connected with each other. When the caseous material has broken into a bronchus and been coughed up, the necrotic walls of the cavity may become converted into firm fibrous tissue and, if there is no spread of the disease into other parts of the lung, healing results.

It is clear, therefore, that there are three stages of tuberculosis of the lung to be considered: (1) infiltration; (2) caseation; and (3) excavation. This classification is the one usually adopted in arranging museum specimens, but it is not satisfactory for the clinician. A patient with a tuberculous cavity may be in the third stage of the disease, but he often has a far greater expectation of life than one with an acute tuberculous broncho-pneumonia without a cavity.

Broadly speaking, prognosis depends on the degree of activity in the lung tissue and not on the presence or absence of cavities. It is true that there are certain dangers dependent on the cavity itself. To mention two: there is the danger of a fatal hæmoptysis from an aneurysm of a vessel traversing the cavity, and there is the danger of infection and the formation of pus resulting in the daily expectoration of a large quantity of sputum. The cavity may act as a nest or incubator for tubercle bacilli and other organisms.

From the clinical point of view there are three types of cavity: (1) the recent cavity with a ragged wall of necrotic tissue; (2) the cavity lined with a fibrotic wall, but containing pus; and (3) the dry cavity with a firm fibrotic wall.

THE "X RAY" CAVITY

In addition there is the "X ray" cavity, which I will consider separately as there is some doubt whether it is a cavity or not. By "X ray" cavity I mean the annular shadow which is often disclosed by radiological examination of a patient who has no other sign or symptom of a cavity. Some of these annular shadows are without doubt true cavities, for they have been confirmed by post-mortem examination. They are not seen except in tuberculous cases. Moreover, it is not uncommon to see in the ring a fluid level which changes with position.

It has been remarked, however, that these annular shadows are always circular or oval, whereas a cavity is often irregular in shape. There is no history of sputum, temperature, or other evidence of

necrosis of lung; there are no physical signs of cavity; if lipiodol is injected into the trachea it does not enter the ring; the shadows are apt to disappear.

In one of my patients there were signs of infiltration in one lung, tubercle bacilli were in the sputum, and radioscopy showed a large annular shadow. I collapsed the lung by pneumothorax, but the patient developed acute bronchitis, and after the second refill I let the lung re-expand. A fortnight later, when the patient had recovered from the bronchitis, radiological examination showed that the lung had re-expanded and there was no annular shadow. It is difficult to believe that a genuine cavity could have been closed after two pneumothorax refills.

For these reasons it has been suggested that these annular shadows are not true cavities but local pneumothoraces, patches of pleurisy called pleural rings or bubbles of air in the lung tissue. When pneumothorax occurs in the apparently healthy it is usually due to rupture of a localised emphysematous bulla, and it is probable that these bullæ or air bubbles are more common than is generally believed. They are formed in the alveoli, which are stretched by air under pressure, thus causing a circular bubble of varying size. A valvular obstruction in a bronchus would allow air to enter but not to leave the bulla. Thus quite a large cyst might form, but it would disappear suddenly like a pricked bubble if the obstruction were removed and the air allowed to escape. It would also disappear by absorption of air if the valvular opening into the cyst become obstructed so that no more air could enter. Andrew Morland has emphasised [1] the importance of valvular obstruction which allows weakened alveoli to become pumped up and produce a cavity. There can be little doubt that these annular shadows indicate true tuberculous cavities or air cysts produced by a valvular opening into the air cells. They are certainly not due to pleurisy and adherence producing a pleural ring, nor are they local pneumothoraces.

It has been found at Brompton Hospital that when an annular shadow has been shown by radioscopy before death, a cavity in the corresponding position in the lung has invariably been found at post-mortem examination, though sometimes a cavity found post mortem has not been previously disclosed by radiological investigation. Air cysts are not found in the post-mortem room, although in the very few cases recorded of death after spontaneous pneumothorax in the apparently healthy a ruptured air vesicle has been found to be the cause.

It seems to me that when a definite annular shadow is shown in the lung by X rays there is probably a cavity, but that if on subsequent radioscopic examination that shadow is not to be seen, it does not follow that the cavity has closed. A small amount of secretion in the cavity or temporary congestion of its walls may make considerable difference to the radiological appearance. J. Sowerbutts has described [2] the course of a case showing an annular shadow and has discussed the probable causes of these shadows.

Although I believe that in most cases these "X ray" cavities are genuine tuberculous ones, I think they should be considered apart from the other three types of cavity. They do not produce symptoms and are consistent with a long life. It seems to me quite wrong to alter treatment because such a shadow appears on radiological examination. The presence of an annular shadow is not an indication for artificial pneumothorax or any other special form of treatment.

[1] THE LANCET, 1932, ii., 707.
[2] Ibid., p. 623.

I have already stated that these shadows are only found in tuberculous cases, and of course the tuberculous condition will require treatment apart from the "X ray" cavity.

DRY CAVITY WITH FIRM FIBROTIC WALL

It also seems to me to be bad practice to institute special treatment for the dry cavity with a firm fibrotic wall. In this case the presence of the cavity can be discovered by physical signs and confirmed by radiological examination after introducing lipiodol. Treatment intended to collapse the cavity usually fails, and often does harm, so is best avoided if the general condition of the patient is good and there is little or no sputum.

I know a woman of 75 who has a large cavity in the upper part of the right lung and, according to the out-patient notes at Brompton Hospital, has had it for over 50 years. She occasionally gets a little bronchitis, and at intervals tubercle bacilli have been found in the sputum, but on the whole her general health remains good. It would be wrong to try to collapse the cavity, and would have been equally wrong 10, 20, 30 or more years ago. I have seen several patients with this type of cavity doing well until pneumothorax or thoracoplasty had been performed in order to collapse it. There are usually areas of adherent pleura and adhesions and, even if these can be cauterised, the fibrotic condition of the lung prevents collapse of the cavity and it is only the unaffected part of the lung that collapses. Similarly with thoracoplasty the size of the lung is diminished, but in the chronic fibrotic case the cavities are not collapsed, as can be demonstrated by the injection of lipiodol after the operation.

In every clinic there are chronic fibrotic cases in which cavities have been successfully collapsed by pneumothorax and cauterisation of adhesions, and sometimes by pneumothorax alone. Many such cases are reported in the literature, but one is often left with the feeling that the patient was doing well before the treatment was started. Rupture of the cavity into the pleural cavity, cutting lung tissue with the cautery or the development of pyopneumothorax, are very definite possibilities and, although it is argued that a cavity is a potential danger, one should remember that certain methods of treatment are themselves dangerous. Experience teaches that life is prolonged by artificial pneumothorax in the early infiltration and subacute fibro-caseous stages of tuberculosis of the lung, but that it is shortened by pneumothorax in the chronic fibrotic stage.

There are exceptions to prove this rule, one being success which occasionally follows the collapse of a cavity producing symptoms in a chronic fibroid case.

FIBROTIC CAVITY CONTAINING PUS

In these cases life is rarely prolonged and the patient is generally seriously incapacitated; apart from this the sputum is unpleasant to the patient and a danger to others. An attempt, therefore, should be made to close the cavities and the best means is pneumothorax. Even in cases where radioscopy shows dense shadows and these, together with the physical signs, make it appear that pneumothorax will be impossible, it is often found that the lung collapses quite well, and if there are adhesions it may be possible to divide them and to get a satisfactory collapse. This method of treatment should always be tried first, unless of course there are any definite contra-indications to pneumothorax. Sometimes, in bilateral disease with cavities in the upper zone of both lungs, it is possible to produce a

partial bilateral pneumothorax with good results. In bilateral cases, however, the treatment is rarely successful.

If the part of the lung containing the cavity is adherent to the chest wall and cannot be collapsed even by cauterising adhesions, but the rest of the lung does collapse, it is bad practice to continue the pneumothorax. In such a case the refills should be stopped and phrenic avulsion, followed by thoracoplasty, performed. If the cavity is at the apex, a partial thoracoplasty may be sufficient, but is less successful than apicolysis in most cases. A complete thoracoplasty is usually necessary, and often gives very good results. If for any reason thoracoplasty is contra-indicated and pneumothorax has failed, sandbags may be placed on the chest for an hour or more two or three times a day in order to restrict the movement of the affected lung and to cause flattening of the chest wall. I know of a patient who supported bags weighing 82 lb. for a quarter of an hour at a time. Weights of 40 lb. are not uncommon.

RECENT CAVITY WITH RAGGED WALL

It is when the cavity is recent and is surrounded by a ragged wall of necrotic tissue that artificial pneumothorax gives the best results and is urgently indicated. Not only does it collapse the cavity, but it tends to prevent the formation of others and to check the spread of the disease. Cauterisation of adhesions may be necessary to make the pneumothorax successful. If pneumothorax cannot be induced, the patient should be kept in bed on absolute rest and sandbags should be applied to the chest over the diseased area. Phrenic avulsion, and still more thoracoplasty, is contra-indicated in such cases, although they may be possible and valuable later when the acute phase has passed and the patient is showing resistance to the infection as evidenced by the formation of fibrous tissue.

CONCLUSIONS

1. A tuberculous cavity in the lung is a potential danger. The danger may be great or small.

2. Treatment of a cavity is not without danger, which is slight in some cases, great in others.

3. The patient should not be exposed to treatment which is more dangerous than the cavity.

4. The annular shadow often shown by radioscopic examination of tuberculous lungs is probably due to a cavity in the majority of cases. In the absence of any symptoms or signs other than those of radioscopy, this type of cavity is not an indication for any special treatment.

5. A dry cavity in a chronic fibrotic case is best treated by the same means as a chronic fibrotic case without cavity. Attempts to close the cavity by pneumothorax or thoracoplasty are usually unsuccessful and often shorten the life of the patient.

6. When a cavity is accompanied by much expectoration, special treatment is indicated, because the disease is very likely to spread and the prognosis is bad. Artificial pneumothorax should be tried first, and adhesions divided if necessary. Failing this, phrenic avulsion and thoracoplasty or apicolysis may be tried, but if these methods are contra-indicated, the lung should be rested by the application of sandbags to the chest wall. Apicolysis is more successful than a partial thoracoplasty.

7. In the acute case with cavity formation, artificial pneumothorax is the best treatment. Failing this, the lung should be rested by sandbags. Phrenic avulsion and thoracoplasty are contra-indicated.

Clinical and Laboratory Notes

LYMPHOGRANULOMA (PORADENITIS) INGUINALE

INFECTION ACQUIRED IN ENGLAND

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With a Note on the Pathological Findings

By G. Marshall Findlay, O.B.E., D.Sc., M.D.
(*From the Wellcome Bureau of Scientific Research.*)

In a paper read before the Royal Society of Medicine[1] last October some account was given of the observations and researches made during the past few years which have led up to the recognition of the pathogeny of a group of conditions severally known as climatic bubo, lymphogranuloma inguinale, inflammatory stricture of the rectum, and genital elephantiasis (esthiomène). It has been shown that they are all due to an infection with an ultra-microscopic virus communicated venereally. Climatic bubo has long been known as a disease acquired in tropical countries. Lymphogranuloma inguinale is the rather unfortunate name which was given by M. Durand, J. Nicolas, and M. Favre, of Lyon, in 1913 to a condition which they described as occurring in France, in ignorance of its identity with climatic bubo. Further, there can be little doubt that this condition, sometimes called poradenitis, was delineated in the writings of syphilographers and others during the past hundred years, though usually referred to under the terms " bubon d'emblée " or strumous bubo.

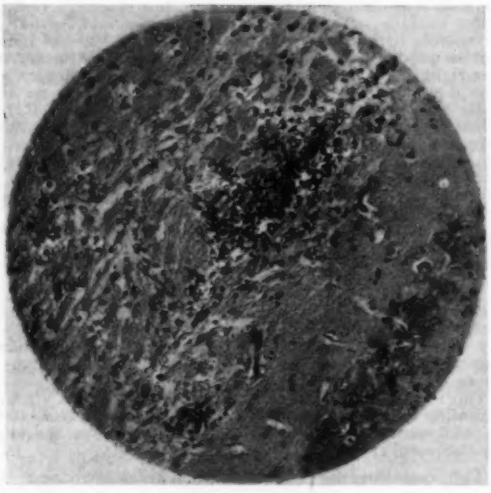
The interest aroused by the writings of the Lyon observers has led to the recognition of the malady in ever-increasing numbers in continental countries, and in America, while the intradermo-reaction devised by W. Frei in 1925, and the demonstration in 1930 by animal inoculation, of an ultra-microscopic virus as the causative agent by S. Hellerström and E. Wassén, followed by the researches of C. Levaditi and his co-workers and of Marshall Findlay, have placed the means of exact diagnosis on a firm basis. At the time the above-mentioned paper was read allusion was made to the fact that no single case of the disease had been recorded in which the diagnosis was established and in which the infection was proved to have been acquired in this country, and it was stated that though the disease might be rare, cases were probably going unrecognised, a statement which elicited in the discussion the fact that no case had been seen at the St. Thomas's Hospital venereal diseases clinic, and that among 10,000 examinations at the Albert Dock Hospital V.D. clinic no case had been seen, with one possible exception and another doubtful case, the opinion being that cases of the disease were not being missed. At the time there was under care (H. S. S.) at the French Hospital a man admitted for bronchitis, who on examination was found to present the typical clinical picture of lymphogranuloma inguinale. His infection was acquired in London, and the virus has since been recovered in experimental animals. This case therefore is the first proved case of lymphogranuloma inguinale to be recorded whose infection was gained in this country, and I am convinced that similar cases will be recognised if looked for and subjected to diagnostic tests.

[1] Stannus, H. S.: History of the Recognition of a New Venereal Disease, R.S.M., Sect. Trop. Dis. and Parasitol., Oct. 6th, 1932.

CASE RECORD

The patient, an unmarried Italian, a waiter, has lived in England without leaving the country for 15 years. His history includes gonorrhœa 18 years ago, and some bronchitis of recent years.

On or about August 7th, 1932, he had intercourse with an English girl in Soho. Previously he had not had coitus for many months. On Sept. 12th he knocked against the corner of a table and thought he had injured his left groin. A swelling appeared in the left inguinal region on the following day. Nine days later (Sept. 22nd) he consulted a doctor, who made a small incision into the mass and evacuated



Section of brain of mouse with encephalomyelitis dying 52 days after intracerebral inoculation of pus from the inguinal bubo of the patient. (× 150.) Mayer's acid hæmalum and eosin.

some pus and blood. During this ten days he had felt ill and shivery but had continued at work. About the same date as the bubo was opened he developed a cough for which he was admitted to hospital on Sept. 28th.

On examination: temp., 99·6° F.; pulse-rate, 112; marked objective shortness of breath and increased respiration-rate; troublesome cough. Blood pressure, 210/100. Urine: 0·1 g. of albumin, no sugar, no abnormal elements. Blood: red cells, 4,920,000; white cells, 10,800; hæmoglobin, 102. At the bases of both lungs air entry was deficient; moist râles and low-pitched rhonchi present. The liver and spleen were not enlarged; with the exception of the groin no glandular enlargement was detected, and the other systems of the body were normal.

The left groin in its inner two-thirds was the seat of a somewhat sausage-shaped mass the size of an egg with the long axis parallel and just above the fold of the groin. It was hard but elastic to touch and non-fluctuating. The super-jacent skin was of a purplish colour, adherent, but not markedly infiltrated. Towards the outer end of the inguinal mass the small incision persisted unhealed and from it exuded a small amount of sticky whitish pus; the edges of the sinus were neither ulcerated, infiltrated, nor undermined. Below the fold of the groin another gland mass could be seen and felt, having the same characters as the one above; from it opened a small fistula which had appeared spontaneously. There was no urethral discharge, no evidence of gonorrhœa or chancroid infection. In the coronal sulcus on the left side was found what might be a tiny scar. The patient was uncircumcised and did not know whether he had had any abrasion there or not. The anus and rectum were normal.

On the skin of the legs, chiefly the thighs and on the abdomen, there was a scaly papular rash. The Wernicke reaction was positive. Frei's intradermo-reaction was negative both to a pooled climatic bubo antigen prepared by Mr. A. H. Walters, of the Albert Dock Hospital, to a climatic bubo antigen provided by Dr. Hamilton Fairley of the Tropical Diseases Hospital, and to a climatic bubo antigen given to me by Dr. Marshall Findlay, of the Wellcome Bureau of Scientific Research. All the controls were also negative. Some gland juice was withdrawn by aspiration from the inner pole of the upper mass distant from the original area of softening as an inoculum for use on experimental animals. Treatment by neosalvarsan and bismuth was instituted on Oct. 8th; the patient was kept in bed, dry dressings were applied over the groin but nothing else was done.

Rapid absorption of the inflammatory mass in the groin began after the first injections and the sinuses were healed in two weeks.

The case beyond being a typical one of lympho-granuloma inguinale illustrates two points of interest—the negative cuti-reaction in the presence of an associated syphilitic infection, and the rapid clearing up of the condition under antisyphilitic treatment. These two points have been noted before and cannot afford to be forgotten if a correct diagnosis is to be reached.

PATHOLOGICAL FINDINGS

The material aspirated from the groin gland was inoculated intracerebrally into six mice, each mouse receiving 0·03 c.cm. Of these six mice one died 48 hours later as a result of the injection, while two survived. The remaining three died 6, 14, and 52 days after inoculation, those dying on the sixth and fifty-second days presenting nervous symptoms such as turning in circles, head retraction, and weakness, entirely characteristic of the infection produced by the virus of climatic bubo when injected intracerebrally in mice. The brains cultured aerobically and anaerobically in broth were sterile. Histological examination of these brains showed evidence of a meningo-encephalitis resembling that found in mice inoculated with the virus of climatic bubo. Brain material from the mouse dying 52 days after inoculation was subinoculated into five other mice which died 4, 9, 11, 13, and 21 days after injection with symptoms and histological appearances similar to those found in mice inoculated with material from known cases of climatic bubo.

A CASE OF NÆVOID AMENTIA

By Clifford Allen, M.B. Lond., D.P.M.

(WITH ILLUSTRATION ON PLATE)

The first case of nævoid amentia was apparently described by Kalischer[1] in 1897. Other cases have since been recorded.[2–13] In this country it was studied by Brushfield and Wyatt,[14] who did much to crystallise the facts known about the condition into a definite syndrome. In America, Harvey Cushing's[15] splendid work has thrown much light on the intracranial diseases of blood-vessels.

The characteristics of nævoid amentia are the following: (1) A nævoid condition of the trigeminal region (face or scalp) seldom crossing the midline but sometimes extending over parts of the body on the same side. (2) Fits which may or may not be Jacksonian in type. (3) Signs of damage to the pyramidal system. (4) Varying degrees of amentia. The condition is prenatal, and the extension of the nævus with increasing physical signs and symptoms is unusual. Apparently any degree of hemiplegia and amentia may occur, but the severer types usually die in infancy. The nævoid condition of the meninges can usually be seen by radiography as crescentic areas of calcification. (Fig. I. on Plate.)

The case recorded here is that of an adult woman aged 49.

FAMILY HISTORY

Her mother died, aged 73, from syncope. The father died, aged 69, from "valvular disease of the heart." There are three brothers, all of whom have died. One died, aged 26,

from a "low fever." One died, aged 18, from appendicitis, and the other died at 6 months from unknown causes. Out of the patient's five sisters four have died—one of "heart disease," aged 47; one of influenza, aged 12; one of measles, aged 3½; and one of anæmia, in infancy. There is one surviving sister who is alive and well. (The high incidence of vascular disease is probably without significance.) None of the family, other than the patient, suffered from fits, spasticity, or nævi.

PERSONAL HISTORY

Her birth was a normal one. Her father was out of work, and her mother did washing until a few hours before the patient was born! She appeared normal and had no fits until the age of 3. At this age she fell out of a high chair. She screamed out loudly but did not lose consciousness. She was picked up by her mother and soothed, but when she was placed down she had a fit. She had occasional fits following this. In spite of her epilepsy she went to school and appeared to progress fairly well. She was however promoted with the class, and was only in the fifth standard when she left at the age of 14. She never won a prize at school. Her sister (informant) saw her in a fit at the age of 16; all that was observed, however, was that her face was distorted, and the observer was too frightened or unobservant to notice whether there was any Jacksonianism. When the patient left school she stayed at home with her mother. She was incapable of earning her own living, but was able to run errands. She lived with her mother until six years ago, when her mother became ill and died. Even up to the hour of her death she appeared to have no realisation that her mother was dying.

When her mother was buried she asked to be allowed to live by herself, and as she owned a little property, which he had inherited, this was permitted by her relatives. Her financial affairs, however, were soon grossly confused, and she "spent a hundred pounds in no time." She bought a number of superfluous things (such as a vacuum cleaner), and had the one room in which she lived redecorated twice in two days. She had "taught" in Sunday-schools since the age of 18, and she filled her room with religious books and covered the walls with texts.

FIG. II

Photograph of the patient.

For the last two years she has lived in total darkness. This was apparently to prevent the motor-bus drivers at the garage opposite from looking at her. These complaints were apparently based on reference feelings. She soon showed signs of being hallucinated, and complained that these men were "talking scientifically" to her without opening their mouths. She then declared that people used to read out loud everything that she wrote, and that all her business was being broadcast by the wireless.

She became progressively worse. She refused to sleep in bed because she "had too much electricity in her body." She was dirty and insanitary in her habits. She set fire to her room on two occasions, but fortunately without serious result. At last she took one of her pupils from the Sunday-school home and kept this child alone with her all night without informing the child's parents. After this escapade it was obvious that she needed institutional care. She was certified and sent to Bexley Mental Hospital. She has settled down in these simplified surroundings and, although hallucinated and paranoid still, has been able to adjust herself satisfactorily.

PHYSICAL FINDINGS

She is a woman with iron-grey hair and a rather hirsute chin. There is a well-marked nævus almost in the midline of her forehead, but more to the right than the left. (Fig. II.) The optic discs are normal. There is a slight ptosis on the left, and her left eye is placed at a lower level than the right. The eye movements are normal. The pupils react to light and accommodation, also consensually. The palate moves normally. The tongue deviates to the left.

Her head tends to be held slightly to the left with slight raising of the left shoulder. In repose the left arm tends to be held in a semi-pronated position, but it swings normally when walking. There are no contractures, and her left arm is capable of free movement. The grip of the left hand is not so good as the right. When asked to grip tightly with her right hand she is noticed to grip her left fingers also. She does not grip her right hand when making an effort with her left. She contracts the fingers of her left hand when the left supinator jerk is being elicited. The musculature is poorer in the left arm, and there is a certain amount of agenesis. The limb is shorter, the bones feel smaller, and the fingers are thinner. The abdominal reflexes are present and normal. Her left leg is very slightly smaller than the right, but the difference is almost negligible. The knee and ankle reflexes are equal and normal. Both plantars are flexor. Sensation is normal. She has no physical signs of disease in her other systems.

INTELLECTUAL TESTS

She is rather dull and simple in her conversation. Although she was a Sunday-school teacher she could not say who Ananias, Aaron, or other prominent biblical characters were. She thought a Pharisee was one who made his living by telling lies!

The result of various tests is as follows: Burt's graded reasoning test gave a mental age of 7. Porteus tests to the age of 6 were reached. Burt's reading tests gave 8, and the Binet-Simon gave $8^{8}/_{12}$.

The outstanding features of this case are: the circumscribed lesion—practically a monoplegia; the approximately midline position of the nævus; the cessation of the fits; and the age of the patient. The development of a psychosis in one suffering from such a combination of intellectual, physical, and æsthetic disabilities is hardly astonishing.

I wish to thank Dr. G. Clarke, medical superintendent of Bexley Mental Hospital, and the London County Council for permission to publish this case, and Dr. F. O. Walker for the photographs.

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ROYAL HALIFAX INFIRMARY.—The annual report shows that last year there were 4241 new in-patients whose average stay was 17·1 days, and average cost £5 13*s.* 6*d.*, a reduction of 7*s.* The average cost per bed for the year was £121 6*s.* 10*d.*, a saving of £5 12*s.* 2*d.* per bed on the preceding year. At 14,632 the out-patients increased by nearly 900.

MEDICAL SOCIETIES

MEDICAL SOCIETY OF LONDON

A MEETING of this society on Feb. 13th, with Sir JOHN BROADBENT, the president, in the chair, was devoted to a discussion on the

Treatment of Peptic Ulcers by Duodenal Feeding

Dr. ERNEST YOUNG said that in America this method was extensively practised, and he thought it had not received adequate recognition in this country. For some years he had used it in most of his hospital and private cases of gastric and duodenal ulcer, and it had yielded better results than any other form of medical treatment. His method was to pass a soft rubber tube of small calibre into the duodenum, where it was retained for at least 21 days. Through this tube the patient received, at two-hourly intervals, seven liquid meals during the day. The main object of the treatment was to secure rest for the ulcerated viscus; as no food passed over the ulcer there was an opportunity of healing. The apparatus consisted of two parts: the thin rubber duodenal tube, and a small irrigator, supported by a filter. The rubber tube, 47 in. long, terminated in a silver-plated capsule. The flow of the liquid food through the tube was regulated by a stop-cock. It was very important that the tube should be as soft and pliable as was compatible with efficiency, because of the length of time it was required to remain in situ. It was his practice to pass the tube in the early morning, on a fasting stomach; the patient was sitting up when it was introduced, and it had been previously moistened with glycerin. When the 23-in. mark was at the teeth, the end of the tube was near the pylorus; no further effort was then made, but the patient sipped water until the 30-in. mark arrived at the teeth, the gastric peristalsis being relied upon to carry the tip of the tube into the duodenum. This last stage might require a few minutes or a few hours. If the liquid withdrawn was watery and acid it indicated that the tip had not yet reached the duodenum. Feeding could begin as soon as the tube entered the duodenum. During the 21 days that the tube remained in position the meals given through it consisted of one raw egg and a tablespoonful of lactose beaten with 8 oz. of milk; with, as an alternative, the egg beaten with 8 oz. of Benger's food and a tablespoonful of cream. If patients awoke in the night feeling hungry, an additional feed of the same character was given. On the evening of the last day of this active routine the tube was removed, and next morning the following diet table was commenced:—

Breakfast.—A scrambled egg, oven toast or breakfast biscuits with a little butter, a teacupful of China tea (no sugar) at the end of the meal.
Lunch.—Boiled fish, sieved potatoes, oven toast or breakfast biscuits, baked custard, a maximum of half a tumbler of water.
Tea.—Two cups of China tea (no sugar) and a few plain biscuits.
Dinner.—Breast of chicken, sieved potatoes, oven toast or breakfast biscuits, junket with a little cream, half a tumblerful of water.
On retiring, sip a tumbler of hot water.

This régime was kept up for 10 to 14 days, and gradually normal diet was resumed, this point being reached in a month or two. At first the tube might cause some soreness, but this was short-lived; in only one of his cases was it so great that the treatment had to be discontinued. If duodenal discomfort occurred shortly after the feeding, he gave a spoonful of alkaline powder in water by the mouth with the feeds for a day or two, and that generally disposed of the feeling. If the patient was constipated, a liquid aperient could be given through the tube; if anæmic, iron and arsenic could be given in the same way. The mouth should be washed two or three times daily. It was unnecessary for the patient to be kept constantly in bed.

With large gastric ulcers on the posterior wall, or a duodenal ulcer with a long history, it might be necessary to retain the tube for from four to six weeks, a control radiogram being taken every ten days. If in three weeks the X rays showed no change in the ulcer, operation should be advised, for a treatment which did not succeed in three weeks was not likely to do so in a longer course. Duodenal ulcer was more debatable. Dr. Young thought that neither this nor any other medical method should be tried if radiography showed deformity of the duodenal cap sufficient to cause pyloric obstruction. The treatment was suitable for cases of duodenal ulcer which had never healed after gastro-enterostomy. The most striking success in his experience had been achieved in cases of multiple ulcers; he had had six such cases in a few years. Five of them made a good recovery, the sixth had only just completed the treatment. He had followed up 75 cases in nine years: 16 stomach, 53 duodenum, 6 multiple in stomach and duodenum. Eleven of the stomach cases made an excellent recovery, 1 did not respond, and was found to have a malignant ulcer, 1 had an ulcer of the posterior wall and was referred to the surgeon, making a good recovery after gastrectomy; 3 he had not been in touch with. Six duodenal cases he lost touch with, 3 were still under treatment, and of the remaining 44, 11 had had relapses. Most of his failures were among his earlier cases, when his treatment was shorter And latterly he had been able, as a result of experience, to make a wiser selection of cases. He believed that for appropriate cases this method was shorter and more acceptable, and produced more satisfactory results than any other form of medical treatment.

A RADIOLOGIST'S VIEW

Dr. G. R. M. CORDINER said that one direct radiological sign on which gastric or duodenal ulcer could be diagnosed was visualisation of the ulcer nitch. Gastric ulcers could be grouped into those with hyperfunction, those ulcers with compensated function, and those with decompensated function. The associated pylorospasm became more marked the nearer the ulcer was to the pylorus. In explaining the symptoms in these cases he emphasised the importance of a weakening of the whole digestive musculature owing to the continual effort needed to deal with obstruction. He thought that the first and second degrees of gastric ulcer should be treated entirely medically, provided that the treatment was adequate and that a sufficient standard of cure was demanded. Treatment of third-degree ulcers should be surgical. There was no difficulty in differentiating between the first and second degrees, but sometimes it might be difficult to state, radiologically, whether a given ulcer should be classified to the second or third degree. In ulcer of the second degree, if treatment by the tube was continued for a fortnight, there was a rapid return to normal function or hyperfunction, whereas in a third-degree condition, with pyloric antral stenosis, there was a marked delay in evacuation time even after the fortnight of intubation. With regard

to the standard of cure, the clinical proof of cure was made more difficult because peptic ulcer tended to remain latent for months, even years, and absence of symptoms did not necessarily mean healing of the ulcer; only radiography could confirm or refute the clinician.

DISCUSSION

Sir WILLIAM WILLCOX held that the method described represented a really valuable advance. During the last four years he had adopted it for almost all the cases of gastric ulcer which had been under his care at St. Mary's Hospital. Under the old régime healing of the ulcer was a very slow process; and some of the cases which had been cured with the tube were ones which he would formerly have handed over to the surgeon. With regard to duodenal ulcer, his experience was that when the ulcer was not too near the duodenum treatment with the tube had been most successful, but if the tube was passed a good distance along the duodenum it was especially valuable when the ulcer was in the pylorus or an inch or so beyond. It was important to remember that in all these cases there was a general tendency to ulceration; the ulcer should be regarded as a localised manifestation of a general toxæmia.

Dr. STANLEY WYARD agreed that intubation was by far the best method of treating gastric and duodenal ulcer. Some of his patients complained of acid regurgitation with pain every time food was passed, and he found that in some this did not yield to alkaline powder, but was dissipated by giving minute doses of sulphuric acid by the mouth—i.e., acid sulph. dil. ℥v.

Mr. A. E. MORTIMER WOOLF spoke of a case of double ulcer which seemed about to perforate, and was in such a bad condition that the speaker dared not operate. He had asked Dr. Young whether the tube treatment would help in that case, and to everyone's surprise the ulcer had healed under the treatment, and the patient had remained well five years.

Mr. A. J. WALTON said that to-day no surgeon stated that no cases of the kind could be cured medically, nor could a physician be found who did not admit that surgery was sometimes the only remedy. There was a group of cases in which there was a short history (three or four months) of ill-defined attacks, in which there was not so much real pain as discomfort. He regarded these as no more than duodenitis, and under no circumstances would he operate on them. They showed no more than a hyperperistalsis and over-activity of the duodenum; no nitch was visible by X rays. Also there were cases of erosion, with either obvious bleeding or some occult blood, and these were not for surgical treatment either. If, on the other hand, there had been repeated hæmorrhages and a long history, he believed that operation should be carried out; and it was also required in cases showing fibrosis and definite stenosis. If a patient over 45 gave a short history of dyspepsia and his past history had been gastrically clear, his working rule was to regard the condition as carcinoma unless there was proof to the contrary. He had operated upon 1677 cases of peptic ulcer, and 822 of them were duodenal; yet it was almost universally accepted that duodenal ulcers formed four-fifths of all the ulcers in this region.

Dr. GEOFFREY BOURNE said that in the few cases in which he had tried it, the intubation method had given him better results than any other.

Dr. G. E. VILVANDRÉ said that pylorospasm was a diagnostic sign of the existence of duodenal ulcer. The really early sign of gastric ulcer was not the visibility of the nitch, but a localised spasm in that segment of the stomach which was supplied by the nerve serving the area; in other words, it was the reaction of the stomach to the presence of the ulcer. He felt very strongly that a number of surgeons who were carrying out gastro-enterostomy should not do so.

Dr. T. IZOD BENNETT said that in the last ten years 1200 cases of peptic ulcer had passed through his out-patient clinic, and a few—he did not know the proportion—had needed surgery. None of that large number had had duodenal tubage, and it would be wrong, he thought, to conclude that this method was necessary. His three-phase criticism of the method was: (1) it was tiresome to the patient, (2) it was an expensive form of treatment, (3) as a rule, it was wholly unnecessary. He agreed that there was now no radical difference of opinion concerning these cases among surgeons and physicians.

The PRESIDENT said there could be no doubt that duodenal feeding was often very successful.

Dr. YOUNG, in his reply, did not agree with Dr. Izod Bennett that the treatment was expensive. It did not distress the patient, for scarcely an ache or pain was complained of during the whole treatment.—Dr. CORDINER also briefly replied, emphasising the fact that other conditions besides ulcer would cause pylorospasm.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY

A DINNER meeting of this society was held on Jan. 13th, under the presidency of Dr. JULIUS BURNFORD, when Mr. TIMBRELL FISHER opened a discussion on

Arthritis

He said that although in many ways an attractive hypothesis, the infective theory in the ætiology of arthritis could not be said to be definitely proved. Most workers agreed that bacteriological examinations of the joint fluids or tissues removed at operation and the blood of arthritic patients had been either negative or inconsistent. It had been suggested that the absence of organisms was due to the fact that the joints were hypersensitive and reacted in an allergic manner to minute doses of microbic toxin. Possibly some joints reacted in an allergic way, while others were actually invaded by organisms. The evidence appeared to be steadily accumulating that the streptococcus played an important part in the ætiology of chronic arthritis, and this raised other interesting problems such as the relation of these forms of arthritis to acute rheumatism. The ætiological problems attaching to arthritis merited attention from bacteriologists and biochemists. Such research could best be undertaken in an arthritic unit, where early cases could be exhaustively investigated and facilities for in-patients were available. Dealing with orthopædic aspects of the disease, Mr. Fisher said that in the more acute stages, when muscular spasm was prominent, every effort must be made, by extension or otherwise, to prevent deformity. The aim should be the retention of a mobile joint, but since ankylosis might occur, the joint should be placed in the optimum position, if necessary in some light form of apparatus, which was easily removable for physiotherapy. Every effort must be made in recumbent cases to avoid faulty posture. It was often overlooked that if a patient was propped up in a sitting posture in bed,

a serious flexion deformity of the hips was apt to develop. The knees were often flexed over a pillow to give greater comfort, at the expense of crippling flexion deformity, and the feet, owing to the pressure of the bed-clothes, assumed a position of talipes equinus or equino-varus. The prevention of deformity in arthritis was of inestimable importance.

DISCUSSION

Sir FREDERICK HOBDAY made some observations on arthritis as found in horses; he mentioned that a good deal of arthritis was occasioned through working the animals before they were mature.

Dr. H. H. MILLS held that much osteo-arthritis was preventable if only there could be continued into later life, particularly during adolescence, the careful surveillance which was begun in infant welfare centres.

Dr. W. S. C. COPEMAN recalled the need for more accurate terminology. Whatever these cases might be called, they fell into two groups, the osteo-arthritic and the rheumatoid arthritic groups; but those writing papers on the subject often used different and confusing classifications. Dr. Copeman also referred to Mr. Fisher's statement that he was not sure of the cause of the alteration in blood-sugar tolerance in rheumatoid arthritis. Pemberton, in America, had suggested that it might have something to do with the fact that large areas of the capillary beds were closed off in this disease, the patients being always extremely pale and cold. Dr. Copeman had taken the blood-sugar tolerance of a patient with rheumatoid arthritis, which was abnormal, and then gave the patient a hot bath; immediately he repeated the test which then gave a normal result.

Dr. CLEMENT NICORY mentioned some work done under the auspices of the Medical Research Council which suggested that an excessive protein diet led to constipation and rheumatism.

Dr. GERALD SLOT said that it had been found at Carshalton the young children suffering from rheumatoid arthritis had been greatly benefited by intravenous injection of heavy metals (gold), but neither in acute rheumatic fevers, in its cardiac manifestations, nor in choreas, had any good results been obtained by this method of treatment. At Hammersmith Hospital also some cases of arthritis in patients not very old or weak had responded extremely well to heavy metal therapy.

Dr. GORDON DEWES said that the principle of rest for arthritic animals might be applied to children, who might, instead of being given salicylates, be kept in bed for some weeks and have their exercise restrained until they reached puberty.

Dr. T. S. KEITH suggested that there was a condition of vascular stasis in which the streptococcus thrived. He believed that streptococci were frequently present in the synovial fringe, but he did not think they were causal agents.

Dr. HOWARD STRATFORD said that if cold acted on the capillaries in the neighbourhood of the joint and caused congestion, the blood-supply to the joint might be lowered, so that organisms got a chance of causing trouble.

Dr. D. M. SCRIMGEOUR discussed a classification on the basis of X ray appearances; Mr. G. B. WOODD-WALKER referred to the mechanical arthritis set up by deformity; Dr. F. MCG. LOUGHNANE mentioned the importance of the genito-urinary system as a focus of infection; and Mr. H. L. ATTWATER referred to the frequent association in middle-aged men of mild prostatitis with aches and pains in the joints.

WEST KENT MEDICO-CHIRURGICAL SOCIETY

A MEETING of this society was held at the Miller General Hospital, Greenwich, on Feb. 10th, when Mr. P. H. MITCHINER gave an address on

When to "Wait and See" in Acute Appendicitis

He began by speaking of the controversy excited by Sir James Berry's paper on the value of expectant treatment in acute appendicitis.[1] In the main he agreed with Sir James's teaching, but he could not associate himself with the implication in this paper that operation should not be undertaken in the first 48 hours of an attack of acute appendicitis. If a case is definitely seen within the first 12 hours after the onset of the attack, when there is so often uncertainty as to the exact diagnosis, he can see no harm, he said, in waiting for a few hours in order that other symptoms may manifest themselves and investigations be carried out; for in his experience no harm will result for waiting 24 hours after the onset of an attack of appendicitis before operating.

It must be remembered that there are definitely two types of acute appendicitis. Firstly, the type with obstruction of the lumen of a previously inflamed and usually kinked appendix by a concretion, and, secondly, the general infection of the appendix wall, probably commencing, as a rule, in the submucous coat, which is usually associated with a mild septicæmia from a blood stream infection. In the obstructive type the initial signs are intermittent colic, and pain usually starting at the umbilicus and subsequently settling over the appendix. This type in the early stages is very apt to be confused with ureteric colic associated either with stone or *B. coli* pyelitis, or with a true appendicular colic in children due to the presence of worms or some other irritant in the lumen of the appendix, or enlarged mesenteric glands. It is only a careful investigation of the urine, radiography, and examination of the tongue which will elucidate the diagnosis in these cases. Such an examination may entail the loss of a few hours, but it is a loss which can be met with safety, for, in the speaker's experience, so long as this type of appendix is removed within 24 hours after the onset of the attack perforation will not have occurred.

In the second type of attack a patient has often had some mild septicæmic condition associated not infrequently with sore-throat, possibly a mild influenzal attack, and the classical signs of appendicitis are present, the temperature seldom, however, raised above 99° F. excepting in small children where a temperature up to 101° F. may be met with. The pain again usually begins in the umbilical region, and the "appendix" whose symptoms start and remain at McBurney's point should be regarded with suspicion. Differential diagnosis in these cases is often difficult. Apart from cases of infective gastro-enteritis and disturbances due to unsuitable food, a perityphlitis may occur both in influenza or pneumonia, and referred pain in a spinal meningitis, or inflammatory conditions in the region of the diaphragm, not infrequently give rise to difficulty in diagnosing the condition correctly. In appendicitis, however, the tongue is usually coated and the breath has a peculiar and characteristic mousy smell.

In young girls rupture of a blood cyst in the ovary is extremely difficult to diagnose from appendicitis

[1] Trans. Med. Soc. Lond., 1932, lv.; THE LANCET, 1932, i., 1027.

but in these ovarian cases the tongue is usually clean and the pulse unduly rapid for the slight temperature present. Salpingitis of course constitutes a great difficulty in diagnosis, and often such a diagnosis is impossible apart from operation.

In these early cases, therefore, seen within the first 12 hours where the diagnosis is doubtful, Mr. Mitchiner advises waiting for a few hours so that thorough investigation of the case may be carried out; many unnecessary operations will be thereby prevented. In cases seen from 12 to 48 hours after onset of the attack the diagnosis is usually obvious, and surgical operation is the only right and proper treatment in all these cases, for however mild the attack may appear clinically it is probably impossible to predict the ultimate course. Moreover, the mortality of operation in this period, when the inflammation is limited to the appendix, is no greater than that of operating on a quiescent appendix.

After 48 hours the patient may manifest one of two conditions. The inflammation may have localised to the immediate neighbourhood of the appendix, in which case the rest of the abdomen is flaccid and not tender, and a mass will be felt in the right iliac fossa or on rectal examination on the right side of the pelvis. In these cases the policy of "wait and see" is the only sound one. Where such a policy is adopted, as it is at St. Thomas's Hospital, it is necessary to keep the patient at rest, to give a diet consisting of fluids only, and to see that neither enema nor aperient is given. The patients must, however, be kept under daily observation, for in a very small proportion (about 0·5 per cent.) the local resistance may be overcome and a spreading peritonitis develop, while in about 1 per cent. the abscess becomes adherent to the abdominal wall and needs external incision.

It is the pulse which must be watched. The temperature is bound to be raised in the presence of a localised septic focus which here exists, and a certain amount of paralytic distension of the bowel is always met with. The only indication then for operation in these cases is a rising pulse-rate. "When I was a dresser at St. Thomas's Hospital," said Mr. Mitchiner, "these appendix abscesses were opened and drained across the peritoneal cavity which had previously been packed off. Even with this operation, however, the mortality was approximately 20 per cent. from peritonitis, which spread in spite of the packing-off of the operation area. It then became the custom to open the abdomen and leave a tube down to the appendix mass so that the pus might point along this when adhesions had formed around the tube. We soon discovered, however, in these cases that pus never did come up the tube but that the temperature dropped and the mass resolved. The next step was the substitution of a thin rubber drain for the tube, and this was quickly succeeded by an exploratory laparotomy when, if the mass was found to be isolated, the abdomen was closed without drainage. The results of this operation were excellent, but it struck some of us that it was submitting the patient to an unnecessary anæsthetic and operation, and so we took to observing the cases where a localised mass was present, and we found, as already stated, that the vast majority settled down provided all aperients and enemata were avoided."

In the second type of case met with after the 48 hours, perforation or gangrene has occurred in the appendix without localisation of infection by peritoneal reaction. No mass can be felt usually, and the pulse-rate will be found to be rising steadily if a half-hourly count is taken. More or less general rigidity of the abdomen is present, indicating a spreading peritonitis, and calling for urgent operation.

In cases of appendicitis of the "ambulatory" type, where the patient goes to the doctor with a mass in the abdomen which has been present possibly for ten days or so, it is always advisable to wait and see, the patient being treated on the lines previously indicated. In cases where expectant treatment has been adopted in dealing with the localised appendix mass, a subsequent appendicectomy should always be performed in about two or three months time, unless an acute attack supervenes, as it occasionally does, during this period of waiting, when immediate appendicectomy should be carried out.

Year.	* Quiescent.	Died.	Acute. First 48 hours.	Died.	Abscess present.	Died.
1904	—	—	21	9	83*	16
1914	188	2	258	20	52	5
1924	175	3	163	2	24 (No op.)	1
1932	124	0	246	11	24 (4 op.†)	3
—	—	—	—	—	47‡	1

* Operation in all cases. † 3 died, 1 alive.
‡ General peritonitis present.

In conclusion, Mr. Mitchiner summarised the figures for appendicitis at St. Thomas's Hospital for various years (see Table).[1] "From the foregoing remarks," he said, "you will see that I advise expectant treatment in all cases of appendicitis not seen earlier where localisation of the infection has taken place by the end of the first 48 hours after the onset of the attack. This treatment will be successful only if combined with rigid avoidance of the administration of any aperient or enema. I further suggest that it is advisable during the first 12 hours of an attack where the diagnosis is in doubt, to wait the few hours necessary to carry out the investigations which will definitely confirm the diagnosis of appendicitis before operating."

MEDICAL SOCIETY OF INDIVIDUAL PSYCHOLOGY

AT a meeting of this society held in London on Feb. 9th, with Prof. W. LANGDON BROWN, the president, in the chair, a paper entitled

Pathomimia Cutanea

was read by Dr. W. J. O'DONOVAN. In the course of his paper he pointed out that certain skin lesions are associated with certain types of personality. For instance, one of his patients, a man with cheiropompholyx, was, like others, suffering from this condition, nervous, and complained of inability to sleep and a poor appetite. Yet his face was placid, and his girth was increasing. In the same way patients with varicose ulcers display certain common characteristics. They are usually dirty, slovenly, and self-satisfied people, who cannot lift themselves out of dependency. Sometimes the ulcer may be the only means by which they can get individual care and attention. Local pruritus had similar psychological interest. Patients with pruritus ani, for example, are egocentric, with a tendency to exhibitionism and logorrhœa. The itching occurs at times of nervous stress, and the part played by suggestion

[1] St. Thomas's Hosp. Rep., 1904, xxxiii.; Brit. Jour. Surg., 1932, xix., 410,

in reinforcing local treatment further indicates the functional nature of the condition. "Red legs," a discoloration of the legs from ankle to knee produced by scratching, recalls the glove and stocking anæsthesia of hysteria, and suggests that "red legs" may correspond to the layman's hysterical itch.

ROYAL SOCIETY OF MEDICINE

SECTION OF THERAPEUTICS AND PHARMACOLOGY

AT a meeting of this section held on Feb. 14th the chair was taken by the president, Dr. E. P. POULTON, and a discussion on

Iodine Compounds in Thyroid Disease

was opened by Prof. C. R. HARINGTON, who dealt with the development of the treatment of goitre. Seaweed soup was said to have been used by the Chinese many centuries before Christ, and in the thirteenth century A.D. Arnaldus de Villanovus had prescribed a seaweed. Burnt sponge had been recommended in the sixteenth century and had been taken up in the middle of the eighteenth century in this country as a secret remedy; this had been finally revealed to a Dr. Wiliner and published by him in 1799. It had been repeated in Parr's Medical Dictionary in 1809 and had been regarded as a valuable if empirical remedy. During the Napoleonic wars there had been a shortage of nitrates for gunpowder and an extract of burnt seaweed had been substituted by one manufacturer for burnt-wood ash. As a result iodine had been isolated in 1812, and seven years later its presence in sponge ash had been demonstrated. Some years later a Genevese physician had independently tried iodine for goitre, with great success, but not without undesired results. Imprudent use of iodine had led to its schedule as a dangerous drug by one Swiss canton. The internal secretion of the thyroid had been demonstrated by G. R. Murray in 1891, and iodine had been discovered in it in 1895. The morphological chemical studies of J. Marine had shown the inverse relationship between iodine concentration and degree of glandular hyperplasia.

These observations formed the basis of iodine therapy in Graves's disease. Many adverse reports on this treatment had appeared, and bad results were ascribed to the fact that the disease was due to over-production of thyroid secretion. Another theory regarded it as a dysthyroidism rather than a hyperthyroidism, the excess of secretion owing its toxicity to want of iodine. This theory lacked experimental support; thyroxine short of iodine had never exercised any toxic effect in the laboratory. Moreover, iodine only benefited Graves's disease for a short period: during the response to iodine therapy, which was a rapid involution of the gland with storage of collagen. The "thyroid diarrhœa" theory of Kocher was more satisfactory; iodine by pressure-retention temporarily arrested the too rapid release of secretion and could only be regarded as a palliative. The cause of Graves's disease was probably outside the thyroid; in the adrenal or the pituitary. The most suitable mode of administration of iodine was in the form of diuretyrosine. The biological synthesis of thyroxine was probably from tyrosine, and one stage could be saved if the iodine was so given; there was no risk of iodism.

THE CLINICAL ASPECTS

Dr. R. GARDINER-HILL said that most simple goitres in London were sporadic, appearing during a crisis of female life or after an infective illness. Marked changes could be detected in the thyroid after natural and experimental infections. There were two types of simple goitre; the diffuse colloid and the nodular. The latter was probably a late stage of the former, though some writers regarded them as separate entities. Iodine seemed to have very little effect on the nodular type, but then nothing had any effect on this form; iodine should be given prophylactically in these cases in times of stress. Care must be exercised, as toxic symptoms had been said to follow iodine therapy. Iodine was of value in the very early stages of the colloid type, and might cause disappearance of the swelling if given within the first two years. It had also great prophylactic value, in times of stress like pregnancy, and in endemic areas.

In primary Graves's disease iodine was of transient value; if given continuously its effects passed off. Belgian workers, however, had recently claimed to be able to control these cases with iodine, increasing the dose whenever the basal metabolic-rate rose. Few physicians in this country would be so optimistic. With medical treatment alone primary Graves's disease always seemed to relapse. The gland showed a striking response to iodine at first, apparently becoming almost avascular; this response was a valuable preparation for operation. Not all glands reacted equally well; the small fibrotic glands which became toxic at the climateric did not harden up in the same way. In secondary Graves's disease the action of iodine was uncertain; there were many expressions of opinion but no well worked-out series of cases. There were two types again; diffuse and nodular. In Dr. Gardiner-Hill's records a very large proportion of both groups had started at puberty; the diffuse glands were in the younger patients and the nodular in the older. Nearly all the diffuse cases had been treated with iodine, which had not produced exacerbation of symptoms. Iodine had not controlled relapses but seemed to have benefited the patient after removal of septic foci. The diffuse type seemed best controlled by mild doses of X rays together with iodine. In the nodular group iodine must be given with caution, and the initial striking improvement was less often seen. The type should be treated surgically.

DISCUSSION

The PRESIDENT referred to Maurice Campbell's geographical work, which suggested that something in the thyroid caused toxic goitre. The best vehicle for the French tincture of iodine was tea. People in endemic areas must eat meat, which contained iodine; or were the victims, he asked, all vegetarians?

Mr. T. P. DUNHILL said that iodine did a great deal of good for a limited time to a large number of patients. It should be given to early cases, but only with great caution, lest they be given so much and be kept from the surgeon so long that they lost a chance of surgical relief. Iodine would not "make any patient safe" for operation. In the primary toxic goitre it was very useful. A young patient developing toxic symptoms had plenty of gland epithelium left and would tolerate iodine, but the amount of iodine must be graded according to the amount of epithelium present. It was valuable in nodular goitres if given carefully. If it was not doing good it should be stopped and the surgeon called in.

Dr. GEORGE GRAHAM emphasised the importance of dosage, advocating not more than grs. 1 to 1½ in the day. Larger doses might make the gland very hard, and operation almost impossible. Very few

cases could be treated with iodine altogether. A very small dose—gr. ⅓—was useful after operation in many cases. Diuretyrosine might be expensive but iodine was very cheap.

Mr. C. A. JOLL questioned whether iodine deficiency were the cause of endemic goitre; there was, he said, considerable evidence to the contrary. Sporadic colloid goitre was not infrequently seen in London, where there was an ample, mixed, iodine-containing diet. Dramatic results from iodine in primary thyrotoxicosis were only obtained in about 30 per cent. of cases, and a definite proportion showed no response at all. He usually began with a dose of 5 minims three times a day. The wide dissemination of optimistic statements about iodine had had the unfortunate result that most patients who reached the surgeon had already had iodine treatment and were very bad surgical risks. Iodine should be used as a preparation for operation. In secondary thyrotoxicosis large doses were not of great value after operation. Post-operative iodine should be given according to the state of the patient.

Dr. A. W. SPENCE defended Marine's views on the ætiology of goitre: iodine deficiency, which might be absolute or relative to the needs of the body. Rabbits fed on cabbage developed large hyperplastic goitres and Marine was trying to isolate the responsible substance, which seemed to be cyanine. Dried cabbage did not produce hyperplasia, which therefore was probably not due to an iodine deficiency. Definite hyperplasia was induced by injections of small quantities of cyanide. The cyanide prevented tissue oxidation and the thyroid produced more thyroxine to overcome the block. In the future some more fundamental substance than iodine would be found for therapeusis. A substance derived from suprarenal cortex would prevent the cyanide hyperplasia.

Dr. W. CRAMER pointed out that the active hormone of the thyroid was secreted into a closed space—unlike any other hormone in the body. Possibly the real secretion was normally into the peripheral vessels of the acinus and only the excess appeared in the lumen. When the acinus was full the cells were pressed against the blood-vessels and no secretion could pass out. There was no great vascularity in simple goitre, but in exophthalmic goitre these vessels were very widely distended. If the distension could be reduced the condition might be alleviated.

Dr. GARDINER-HILL, in reply, said that he had recently used 10 minims of Lugol's solution three times a day as a pre-operative measure, but surgeons did not like too hard a gland. The most vascular goitres reacted best to iodine.

Prof. HARINGTON, in reply, said that there was no form of experimental goitre that could not be prevented by iodine. If iodine deficiency was not the universal cause it was the commonest cause. The soil might be deficient in iodine near the sea, and the vegetables and the flesh of grazing animals would also lack iodine in these areas. Diuretyrosine was quite cheap.

CORK CLINICAL SOCIETY

Prof. C. Y. PEARSON, in opening the inaugural meeting of this society on Jan. 27th, expressed his pleasure at being elected honorary president, and spoke of the importance of such societies to the medical profession. He urged that every member should try to contribute something so that it should have the advantages that come from regularity in attendance, mutual criticism, and the promotion of professional cameraderie and coöperation.

Prof. JOHN DUNDON, the president, then reported the case of a man, aged 55, who had double castration performed 16 years previously for tuberculous orchitis and epididymitis, and now showed signs of renal and vesical tuberculosis; Prof. J. M. O'DONOVAN described three cases of rupture of the lung in the course of artificial pneumothorax treatment for pulmonary tuberculosis; and Dr. G. A. BARTER read notes on a case of

Myringomycosis

The patient, a young woman, complained of discomfort, itchings, occasional severe pain, deafness, and discharge for 14 days from the right ear. Examination revealed a thick membrane like blotting-paper covering the membrana tympani and the adjacent canal walls. The membrane was greyish in colour, and there was a fur growing from the upper portion; in this fur were minute droplets of black pigment. The membrana tympani was somewhat swollen but not perforated. Removal of the mass of fungus revealed a roughened, reddened drum membrane and canal wall showing a few punctate hæmorrhages.

Prof. M. Grimes identified the fungus as of the class *Aspergillus niger*, the species not yet worked out. The canal was treated with Mandl's paint, and apparently complete recovery took place in three days, followed by complete relapse in a week. The patient is at present under treatment. Reviewing published records Dr. Barter said that when these saprophytes became parasitic on man they lost their characteristics and became impossible to classify. The condition was said to be more common in females (11 to 2). Probably otomycosis was commoner than is suspected.

Dr. J. B. HORGAN recalled a case in his experience that responded to treatment with potassium permanganate.—Dr. W. J. O'DONOVAN suggested that the fungus was an epiphyte, and that the staphylococci present on the original culture were possibly the real causes of the condition.

REPORTS AND ANALYSES

LIVER SALT

(JOSEPH LINGFORD AND SON, BISHOP AUCKLAND)

THIS preparation consists of a white powder which on addition of water produces a clear sparkling solution. When analysed the following results were obtained:—

Magnesium sulphate	21·1 per cent.
Sugar	28·0 „ „
Sodium bicarbonate ..	26·0 „ „
Tartaric acid	23·5 „ „

This is a well-balanced medicinal salt, aperient in character, which when dissolved in water effervesces freely. It is clean and agreeable to the palate. The sugar present masks the rather harsh bitter taste natural to the Epsom salts, and on this account the preparation will be appreciated by children. The method of packing merits a word of approval. The top of the tin is invisibly lacquered, to prevent discoloration, and a rubber ring within the lid by pressing against the top of the tin closely should prevent deterioration of the contents indefinitely.

REVIEWS AND NOTICES OF BOOKS

Traitement chirurgical de la tuberculose pulmonaire

By A. CHARRIER and E. LOUBAT. Preface by E. LEURET. Paris: Masson et Cie. 1932. Pp. 366. Fr.65.

THE authors of this book have set out to supply an explicit account of the surgical therapeutic procedures for pulmonary tuberculosis in use to-day, and it is evident that great pains have been taken to make the record as complete as possible. After a short general introduction on collapse therapy, the book is divided into three main parts, which deal respectively with phrenic avulsion, pneumolysis, and thoracoplasty. Each section contains subsections on anatomy, operative technique, complications, indications, and results. In the operation of apicolysis, paraffin wax is advocated as the "fill," although the use of fat and muscle for this purpose is described. Of the three routes by which the operation may be performed the approach through the first intercostal space is advised. The posterior route is described and acknowledged to be useful, but the axillary incision is given three lines. This approach is, however, very commonly used in this country and America and has many points in its favour, with the sole disadvantage of a diminished quantity of overlying tissue. If it is performed by resection of a small portion of the second rib high in the axilla the operation is very satisfactory. Operations for partial thoracoplasty are well described, but some of them, especially those with an approach through the base of the neck, involve a very tedious dissection. The effect of such measures is necessarily very limited, and would hardly appear to justify such extensive operations, but pneumolysis and localised thoracoplastic procedures are looked upon with considerable favour in France. The indications and contra-indications of permanent collapsing operations are discussed, prominence being given to the value of preliminary phrenic avulsion in assessing the activity of the small, apparently healed focus in the opposite lung.

The chapter on the results of thoracoplasty deals with all the authors' reported cases, and they are analysed as far as possible to show the advantages and disadvantages of the different procedures adopted. Figures are quoted to show that the operative mortality is three times greater for the one-stage than for the two-stage operation, that it is greater in males than in females, and for the right side than for the left—all factors to be borne in mind when an operation is being planned. A short section at the end of the book deals with tuberculous empyema; here is outlined the treatment of the condition (1) when uncomplicated, and when associated with (2) mild and (3) severe secondary infection. The teaching here is orthodox, although the attempts to close pleural fistulæ by forced suction which fills the fistula by the prolapsed lung, as advocated by Redaelli, is a new suggestion which, we feel, is only likely to be effective on rare occasions; though in the original account of eight cases treated by this method closure of the fistula is said to have resulted in all.

The wisdom of using local and regional anæsthesia for thoracoplasty is debatable. It has obvious disadvantages, such as results from the mental distress of a conscious patient submitted to an extensive operative procedure, even when pain is almost completely eliminated; the difficulty in obtaining satisfactory and even anæsthesia over the whole operation area; the possibility of excessive absorption, or a specific idiosyncrasy of the patient for the local anæsthetic or adrenaline which is commonly used with it; and, lastly, the tendency of the local infiltration into the tissues to interfere with satisfactory healing, especially in patients whose resistance is primarily low. Where adequate gas-and-oxygen anæsthesia can be combined with local infiltration into the intercostal nerves, its use would appear to obviate most of the disadvantages mentioned above.

This book as a whole presents a balanced view of the modern surgical treatment of pulmonary tuberculosis.

The Biochemistry of Medicine

By A. T. CAMERON, M.A., D.Sc., F.I.C., F.R.S.C., Professor of Biochemistry, Faculty of Medicine, University of Manitoba; Biochemist, Winnipeg General Hospital; and C. R. GILMOUR, M.D., C.M., F.R.C.P.(C.), Professor of Medicine and Clinical Medicine to the University; and Physician to the Hospital. London: J. and A. Churchill. 1933. Pp. 506. 21*s*.

AN observer of books designed for the medical profession can obtain much quiet amusement by watching the changing fashions. Some years ago the number of text-books issued on physical chemistry for medical students was remarkable. To-day the fashion has changed slightly, and there seems to be a desperate attempt to force biochemistry upon the medical profession. Some 18 months ago the battle was directed against students, but to-day the post-graduate medical student, the practitioner, the physician, surgeon, and gynæcologist are the ones against whom the major attack is waged. This particular example of a long series of such text-books is written jointly by a professor of biochemistry and a physician, both of such high repute that we opened it with pleasurable anticipation. It is, however, disappointing. The book begins with a hotchpotch chapter entitled An Outline of Human Biochemistry. This includes general philosophic considerations, the composition of the diet, the elements of organic chemistry, general principles of enzymes, hydrogen-ion concentration, and so forth. The information given in the book as a whole is sound enough, especially from the biochemical point of view. The most modern and up-to-date section on medicine is that dealing with nephritis. The authors missed a wonderful opportunity when they failed to discuss in detail the biochemistry of Graves's disease; it seems a pity to leave this out, while including long and rather wearisome descriptions of lactosuria and maltosuria. The account of diabetes mellitus, particularly from the clinical aspect, leads one to doubt whether the authors are in the habit of conducting the practical treatment of this disease. The need for biochemistry in medicine is made clear, but the limitations laid down for the relation between physician and biochemist seem hardly likely to lead to the happy and fruitful development of their association. The authors suggest that a chemist, preferably with no medical knowledge, should be chosen as a collaborator by a clinician. Not only should the biochemist be an assistant, and merely an assistant, so far as relationship to the patient is concerned, but it rests with the clinician to "query the results and call for their repetition if he

considers that they do not fit in with the symptoms exhibited."

It is curious that a professor of biochemistry should subscribe to this sort of one-sided criticism. The principles of clinical diagnosis, founded on signs and symptoms, are surely not so firmly established as to justify the physician in querying the figures of a biochemist if the results of observation point different ways. The biochemist might well retort with a suggestion that the physician should look again and make a further examination. We feel that the progress of medicine demands the coöperation of physician and biochemist in some better balanced relation than that of master and servant.

Chemical Wave Transmission in Nerve

By A. V. HILL, F.R.S., Foulerton Research Professor of the Royal Society; Honorary Fellow of King's College, Cambridge. London: Cambridge University Press. 1932. Pp. 74. 5*s*.

Prof. A. V. Hill is well known as an attractive lecturer on complicated subjects. So great is his reputation in this direction that no conference of physiologists seems complete, whether it is held in England, Germany, France, or America, without an address by him. His selection to deliver the Liversidge lecture before the masters and fellows of Christ's College, Cambridge, was welcomed, as will be the small volume based upon his lecture. The book contains little that is not already known to the expert who attempts to follow this extremely difficult and ever-changing subject. But to those not familiar with the remarkable advances made by Prof. Hill and his colleagues the book will be of the utmost value. In it will be found, written in the most interesting manner, a readable description of the modern views on such difficult questions as transmission of impulses through nerves, chronaxie, and the effect of iodo-acetic acid.

A Text-book of Pathology

Fifth edition. By W. G. MACCALLUM, Professor of Pathology and Bacteriology, the Johns Hopkins University, Baltimore. London: W. B. Saunders Co., Ltd. 1932. Pp. 1212. 50*s*.

THIS work requires no introduction to English readers, for it is used as a standard text-book in many teaching schools. Apart from a style which makes easy reading, the special feature of the work is the way in which Prof. MacCallum has planned his teaching on ætiology. Types of injury rather than the location of the lesions are made the basis of classification. To the student who has covered the subject as usually set out in text-books of general and special pathology, this approach gives a fresh and a more comprehensive view of the meaning of pathological processes. The book is therefore of special value to advanced students.

In the fifth edition many alterations have been made reflecting the changes in views in the last four years. A short new chapter entitled Disturbances of Lipoid Metabolism has been introduced to cover Gaucher's and Niemann-Pick's diseases, the lipoidosis of Schüller and Christian, and xanthoma. Rearrangements and additions have been made in the chapters on tuberculosis in order to discuss the importance of the allergic reaction in this disease and its bearing on the form and distribution of the lesions. Recent work on the function of the parathyroid glands and on the importance of the disturbances of the calcium and phosphorus metabolism in rickets is noticed, and short sections have been added to include undulant fever, tularæmia, psittacosis, and post-vaccinal encephalitis. A large number of illustrations have been added and a few of the old ones are represented by substitutes. The reproduction is excellent, and throughout the work the publishers have maintained a high standard.

A Synopsis of Surgical Anatomy

By ALEXANDER L. MCGREGOR, M.Ch. Edin., F.R.C.S. Eng., Lecturer on Surgical Anatomy, University of Witwatersrand; and Assistant Surgeon, Transvaal Memorial Hospital for Children. Bristol: John Wright and Sons, Ltd. 1932. Pp. 609. 17*s*. 6*d*.

THIS book, which has a foreword by Sir Harold Stiles and an introduction by Prof. Raymond Dart, presents parts of applied anatomy in rather a novel way. They are dealt with neither from a regional point of view, nor from a clinical standpoint, but are grouped under multiple headings which have some connexion with both of these outlooks. The result will prove, we think, acceptable to the senior student for whom the work is mainly intended. The parts are presented almost as in a note book, and are illustrated by useful little diagrams. We have read through the work with no little profit and believe it will be found very useful.

Fungous Diseases

By H. P. JACOBSON, M.D., Dermatologist, Los Angeles General Hospital. London: Baillière, Tindall and Cox. 1932. Pp. 317. 30*s*.

A COMPREHENSIVE survey of the fungous diseases on clinico-mycological lines was overdue, and will be welcomed by physicians interested in diseases of the skin. In this compact readable volume is recorded all that the clinician needs to know. For the purposes of nosology the subject is divided into three main groups: (*a*) those infections in which the skin is mainly involved, (*b*) those in which there is or may be a primary cutaneous or mucocutaneous focus with frequent systemic involvement, and (*c*) those with primary systemic effect and occasional involvement of the skin or mucous membrane. No hard line of division can be drawn between these groups, but such a classification is more convenient for clinical purposes than one based on the terminology of the mycologist, or the finer differentiation of cultural appearances in the laboratory. Some knowledge of elementary terminology, however, is essential, and the average need is well met in the introductory chapter on Specific Considerations. The ensuing 100 pages are devoted to a clinical and mycological study of the dermatomycoses—i.e., the ringworms and moniliasis, which includes thrush and the yeast-like infections. These pages will repay close attention. They are full of clinical and therapeutic detail, and the illustrations also will be found of value; those desirous of learning more will avail themselves of the extensive bibliography. The succeeding chapters are devoted to diseases only rarely met with in this country, such as maduromycosis, sporotrichosis, blastomycosis, and actinomycosis. Except for the last named their occurrence is so unusual as to cause quite a stir in dermatological meetings when, perhaps once in a year, a case is exhibited.

This book provides a valuable and accurate exposition of the state of our knowledge in the field of clinical mycology, and should be cordially welcomed.

THE LANCET

LONDON: SATURDAY, FEBRUARY 18, 1933

THE LANCET COMMISSION ON NURSING

EXACTLY a year ago the Final Report of THE LANCET Commission on Nursing was issued. It created more immediate interest than those responsible for its production had ventured to anticipate. The publicity it received was indeed unprecedented for a technical report of that nature, and must be attributed to the widespread appreciation of the curious situation which the Commission was called into being to investigate. At a time when other professions and occupations were grievously overcrowded, and parents and headmistresses were searching eagerly for careers for the rising generation of young women, the hospitals were advertising in vain for candidates for training and for trained nurses to take posts as sisters and staff nurse. Early in 1931, when preliminary inquiries were being made by the Commission, recruitment for this service was found to have reached such an anxious position that of the 600 odd hospitals responding to a question from the Commission on this point, one-fifth failed to secure suitable candidates as sisters, and one-half failed to secure staff nurses and probationers of the standard they required. The reasons given by the girls themselves, and confirmed by parents, headmistresses, and advisory employment bureaux, were variants of the following: long hours, poor pay and prospects, lack of freedom, undue restrictions when officially off duty, and the dual strain of ward work and study, especially since the introduction of State examinations. The gap between leaving school and entering hospital was held to allow the deflection into other less satisfying occupations of many girls who would have taken up nursing had they been able to enter the profession direct from school, or at least to make effective use of the interim between obtaining a school certificate at 16 and the age of admission to hospitals. The 60 recommendations designed to renew the popularity of nursing as a profession were framed by a Commission whose very composition was a guarantee that all points of view would be respected. It consisted of experienced nurses, chairmen of hospital boards, and doctors, reinforced by an economist and women associated one with a secondary school, one with a college, and a third with an employment committee. It is of interest that one of the nursing members of the Commission has recently been elected by State registered nurses to the General Nursing Council, and the selection of the honorary secretary as one of the five members of this Council nominated by the Minister of Health is a gratifying tribute to the work of the Commission.

A survey of the comments made upon the Report of the Commission, at its issue and since, reveals much praise and little specific criticism, and, as was recently pointed out at a meeting devoted to its consideration, one recommendation became an election issue among the candidates for the General Nursing Council. We are aware that the praise accorded to the format, arrangement, and arguments of the Report in some quarters has masked reluctance to admit, in spite of their firm statistical basis, the premises on which certain of the conclusions and recommendations are founded. A number of hospital authorities, following private inquiries, have expressed publicly their satisfaction in finding that the recommendations of the Commission reflect their current practice; from other institutions it has been suggested that with the amendment of regulations in one respect, such as the giving of a whole day off instead of a half day per week, any adjustments required are complete. A more searching study might have revealed points of disagreement between the recommendations of the Report and the existing conditions, which have been ignored as details, but to which the nursing members of the Commission would have attached considerable importance. The limitation of hours of night duty to 57 a week, the allowance of 40 minutes for the main meal of the day and of three clear hours off duty independent of meals every day, and, not least, the scale of salaries of ward sisters, for example, are not details, and reforms here are still wanted. It is clear that the times are hardly propitious for innovations which would directly or indirectly increase the cost of running a hospital, but those which cannot now be adopted could with advantage be tabled for consideration in the future. The need to make changes in conditions of service for the express purpose of attracting candidates for training has during the past year become less urgent, because the influx of suitable young women into the nursing profession has greatly increased. The following factors must here have been influential: (1) the economic depression, during which any form of training associated with board, lodging, and pocket money has obvious attractions; (2) the improvement in conditions of service, as in certain municipal hospitals; (3) the advertisement of nursing as a profession associated with the publicity given to the Commission's report. To what extent each factor has played a part can hardly be estimated. The hospitals will find it safest to assume that (1) is the principal cause, and to make plans for a future in which the resumption of normal economic conditions may again engender a critical attitude on the part of possible candidates to the relative claims of nursing among other forms of social service open to women.

It is an old saying that a square peg will not fit a round hole. In the past the manner of adjustment in hospitals has been to chip the edges off the peg, or at least to rub off its corners, not without risk of some permanent damage to its structure. It is also possible to bring about and maintain a firm and permanent attachment by altering slightly the shape of the hole, and THE LANCET Commission have shown how this may be done

with little derangement of the organisation of the hospital or (still more important) without harm to the patient for whom the hospital exists. The square is an apt metaphor for the fourfold loyalties which a nurse owes to the patient, the hospital, the doctor, and to her own profession, especially to younger members of it. The fact that these loyalties may conflict, or at different stages of the nurse's career may assume different proportions, must not be ignored. The long years of training are designed to give her not only technical skill, but a balanced outlook. This is not easy to acquire without more leisure than a student of nursing has at her disposal. It is the more important that her previous education should fit her to adapt herself to her surroundings while retaining the critical spirit which will enable her to do her share, later on, in modernising her chosen profession. We welcome, therefore, a certain liveliness on the nursing front, whatever its cause, and are proud that through THE LANCET Commission on Nursing we have been able at least to clear the ground on which these young people will ultimately build, unencumbered by traditions which have lost their significance while retaining those which still have value.

CONTROL OF INFECTION IN CHILDREN'S WARDS

WHEN children are aggregated in residential institutions it is impossible entirely to prevent the introduction, from time to time, of the common bacterial or virus infections. Apart from the resulting morbidity, and perhaps mortality, the functions of the institution are curtailed for the time to a degree which varies with the type of infection, the numbers and age-groups of those exposed and, above all, with the size and spacing of the sleeping quarters, whether these be the dormitories of a public school or orphanage or the wards of a sick children's or fever hospital. The last-named institutions are far from exempt from the introduction of infections other than those for which the children are actually admitted; the problem of the medical administrator is the safe disposal of the child who, suffering from a disease which may or may not itself be infective, is in addition incubating some unknown infection. If the fact of exposure is elicited on admission suitable measures for segregation can be taken, but, more often than not, no history of exposure is obtainable although it has been systematically sought. The child is admitted to an ordinary ward, the other susceptible inhabitants of which become, in due course, at risk. Against certain of the specific infections which may be introduced prophylactic measures are available. Passive immunisation with diphtheria antitoxin is no new thing and nowadays it is no longer absolutely necessary to close a ward infected or cross-infected with scarlet fever or measles. The source of infection having been, if possible, traced and removed, the injection of scarlet fever antitoxin (with or without the prior performance of the Dick test) or of convalescent or adult-immune measles serum will protect the remaining inmates for a number of days. Provided that all new susceptible admissions are similarly protected whilst danger of infection is still to be apprehended, the ward can continue to function with a high, but not absolute, degree of safety. But even if the similar protective properties claimed for convalescent chicken-pox and mumps serum are upheld upon further trial, these are only measures directed against a few of the specific infections which have already made their presence manifest.

The danger, however, is not confined to the so-called specific infections. With the exception of diphtheria, which is readily controlled, and infections of relatively rare occurrence, like enteric and cerebro-spinal fever which are still more readily controlled, these specific infections are not in themselves lethal. It is the introduction of non-specific infections such as the virus of the common cold or of "influenza" and the mixed flora of broncho-pneumonia amongst children already ill that is much more to be feared, not only from the impossibility of control but from the serious clinical consequences. The potentialities of these non-specific infections have perhaps been more fully appreciated by continental pædiatricians, from GRANCHER onwards, than by ourselves. GRANCHER, more than 40 years ago, realised the danger of ward infections from acute respiratory and intestinal conditions and introduced at the Enfants Malades movable screens which, when placed around cots, provided at least a measure of segregation of potential sources of infection. GRANCHER'S success prompted his pupil HUTINEL, in 1894, to construct at the Enfants Assistés his famous "boxes." These were true cubicles, the glass divisions not reaching to the ceiling, and were formed by sub-dividing an ordinary ward. The two lateral series of cubicles were divided by, and entered from, a wide central corridor. Each cubicle had its own window and accommodated two children. Boxes on HUTINEL'S plan are still in use in at least one large fever hospital in this country. In true cubicles of this type, provided the use of separate utensils and coats and a scrupulous technique of hand-washing is rigidly adhered to, all the common infections, save two, can be safely nursed without spread by droplet spray from one cubicle to the next. But, as the late FOORD CAIGER and others have shown, measles in the early catarrhal stage, and particularly chicken-pox in its earliest stage, cannot be so nursed without spread. Complete structural separation and asepsis is necessary for the safe management of the two diseases in these early stages. The same limitations apply, as E. H. R. HARRIES showed,[1] to the bed-isolation or invisible barrier nursing advocated by C. RUNDLE and A. H. G. BURTON,[2] though this system is highly successful in other conditions and is also economical, since no structural alterations are necessary. Given a well-trained nursing staff, and this is essential, any ward can be quickly converted to a bed-isolation ward, the system depending entirely upon adequate spacing of the

[1] THE LANCET, 1924, i., 491.
[2] Ibid., 1912, i., 720.

beds and rigid asepsis. Similarly, in any ward, single cases can be "barrier-nursed." The tendency in recent years in this country has been to construct at fever hospitals series of completely separated glass-walled single-bedded rooms, entered, as a rule, from an outside verandah. In these rooms patients suffering from any infectious condition or none can be safely housed without spread from one room to the next, the same aseptic technique being, of course, imperative. But such units constitute only a small proportion, and usually a quite inadequate proportion of the total accommodation of any hospital and, in any case, essential as they are, cannot solve the problem of the unavowed "incubating" child.

A bold attempt has been made to solve this problem at the new children's hospital at Basle, a detailed description of which has recently been given by E. WIELAND.[3] In considering the means that should be adopted for reducing the introduction of infection to a minimum, the authorities rejected a device which is in use at several continental children's hospitals—viz., the quarantine block into which all new admissions are received. In order to be effective children must be detained there, before admission to the wards, for three weeks, which is the longest incubation period of the common infections. Such long detention would result in considerable disorganisation at an institution of this type. Further, it is pointed out, a quarantine block does not prevent the introduction to the main wards by visitors or careless staff of influenzal infections, or the transference of such infections from child to child. In the construction of the new hospital, which is adjacent to the old, three main principles were adopted: complete separation of the clinics and administrative units from the hospital proper; complete separation of individual ward blocks from each other, structurally, administratively, and as regards nursing; and the substitution of small sick rooms for large wards. The new hospital contains no large wards at all. Although it was recognised that the ideal, from the point of view of introduction of infection, was the single-bedded room, as at the Pasteur Hospital, the expense of such an arrangement made its general adoption impossible. Moreover, the child completely isolated from its fellows tends to become restless and unhappy. The next best was the two-bedded room and, with the exception of a few four-bedded rooms for older children or surgical cases, the hospital block is composed of series of these standard or unit-rooms. Glass was chosen for the walls, not only because of its hygienic and psychological advantages, but because it permits of easy supervision of patients, points which are well recognised in this country. Each room, which is completely self-contained as regards lighting, heating, and sanitary and nursing appliances, has an entrance from a corridor and an exit on to a balcony facing south, the balcony being subdivided by low glass partitions. Abundant sunshine and fresh air without draughts are provided for by high double windows with three divisions and glass doors with panels which may be readily opened outwards or inwards. Direct communication between one room and the next is provided by lockable glass doors in the partitions. These doors were ultimately found to be a weak spot in the design. Three adjacent rooms constitute a complete nursing unit staffed by a sister and nurse. When the hospital was opened it was hoped that this three-room system could be employed with success for a scheme of ward-quarantine. A central four-bedded room was regarded as the sick room proper, the two adjoining two-bedded rooms being reserved for the isolation of any children from the central room who might develop suspicious symptoms. The transfer having been made, the communicating door was locked, thus enforcing access from the corridor. Provided that the well-known aseptic precautions of barrier nursing were maintained, the child in the side ward was effectively isolated. This scheme worked very well as long as one or other of the side wards happened to be available when it was wanted; but, if all three rooms were already occupied, as in times of pressure they were, the system broke down and the only consolation was that the number at risk in the central room was small. WIELAND considers that during the two years' working of the hospital the two-bedded standard room, which may in emergency house a third patient, has proved most successful in minimising infection, although he admits that the communicating doors were a mistake which will not be repeated. He thinks that a happy solution has been found for the modern demand for individualised hospital treatment without undue increase in nursing staff or running costs.

When the old hospital comes to be rebuilt, WIELAND is confident that the two-bed system is the one to adopt. As he remarks, nothing prolongs and increases the cost of hospital treatment for children so much as the appearance of secondary infection. There is nothing to be said, from this point of view, in favour of the large ward. The smaller the ward-unit the better. Where, in existing institutions, the wards are large, it is essential to provide ample isolation accommodation of one type or another for the reception of the suspicious case.

[3] Schweiz. med. Woch., Dec. 3rd, 1932, p. 1123.

"EARLY" EVIDENCE OF TUBERCLE

AT a meeting of the Liverpool Medical Institution last month several speakers proclaimed the modern doctrine that in the diagnosis of pulmonary tuberculosis physical signs are of relatively little value, and that X ray examination is of paramount importance. Physicians of an older generation are wont to deplore such reliance upon the results of ancillary investigation, as opposed to those of clinical examination. We are often reminded of the old masters of the arts of physical examination who, without the assistance of pathological laboratory or X ray department, successfully diagnosed the presence and nature of disease within the body cavities. Actually it is by no means certain that the skill of the older physicians

excelled that of their successors. The physician of to-day can still diagnose the presence of fluid in a pleural cavity, of pneumonia in a lung, or of phthisis when the disease is firmly established, as surely as could his predecessors. Like them, however, he cannot by himself distinguish with certainty between pulmonary excavation due to tuberculous caseation and cavitation of the lung due to other causes, nor can he diagnose a deep-seated tuberculous invasion of the lung tissue, whether cavitation be present or not, without the help of radiography. The touch and hearing of a blind man may indeed be more sensitive than those of a man with good eyesight, because he has learned to concentrate on the faculties he has retained, to compensate (so far as may be) for those he has lost. But if this be granted, the observations of a blind man, however sensitive his touch, still have not the value of those of a person who sees as well as feels. And if it be true that the older clinicians excelled those of a later generation in the arts of percussion and auscultation—a thesis difficult to prove—it is equally true that no amount of clinical receptiveness will enable one to detect physical signs of disease when those signs are non-existent. Radiography has proved that pulmonary tuberculosis is not detectable by physical examination unless the lesion has certain characters, and is situated near the surface of the lung. It is essential that this fact should be recognised, for if students are taught that incipient pulmonary tuberculosis can be detected by the method of light percussion and attentive auscultation, many lives will be lost which might otherwise have been saved.

There is here no divorce between clinical acumen and what are called scientific methods. The practitioner must learn to recognise the clinical danger signals before he can apply his scientific knowledge; no degree of skill in microscopy or radioscopy can compensate for ignorance at the bedside. But unfortunately, in the past, far too much stress has been laid on the importance of minute differences in percussion note or barely perceptible changes in respiratory murmurs. The student who, like MACAULAY, could recognise only two tunes, the National Anthem and the other, was discouraged at the outset of his career; the practitioner whose hearing had become blunted by the passage of time found a post-graduate course in modern methods of percussion equally depressing. But common sense is more valuable in the diagnosis of pulmonary tuberculosis than an artistic imagination. Far too little emphasis has been laid on the importance of such elementary observations as the patient's appearance, the history of a hæmoptysis especially in a young person, evidence of exposure to infection, the serious significance of lassitude at a period of life when physical energy should be abounding. Few students have been taught to realise the sinister implications of a furtive and evasive attitude on the part of a patient whose cough has driven him to the doctor, or the almost conclusive evidence afforded by the adolescent's indignant denial of hæmoptysis or any other symptom which he thinks may be interpreted as an indication of consumption. A lack of clinical observation rather than defective clinical examination is responsible for a failure to realise the need for sputum tests and X ray examinations until physical signs reveal the presence of disease so advanced that a cure can no longer be expected.

Much attention is devoted to-day to such surgical procedures as thoracoplasty, adhesion-cutting, and phrenic avulsion in the treatment of pulmonary tuberculosis. Our own columns this week testify to the place they take in the thoughts of those whose work brings them into daily contact with phthisical patients. The ingenuity displayed in the treatment of advanced tuberculosis is praiseworthy and the skill displayed by surgeons who have specialised in thoracic operations is admirable. But such desperate expedients as thoracoplasty would seldom be necessary if early diagnosis was the rule rather than the exception. Pulmonary tuberculosis in the stage of the "rundherde" or "frühinfiltrat" readily yields, as a rule, to rest, whether the patient is put to bed and kept there till resolution occurs or whether he is subjected to an artificial pneumothorax carried out before there has been time for adhesions to form. The appalling death-rate among young consumptives will continue to be a reproach to the medical profession until medical students and practitioners understand the importance of the danger signals of disease, the unreliability of physical signs, the necessity for repeated sputum tests, and the immense importance of X ray examinations in the diagnosis of early lesions.

THE PHARMACOLOGICAL LABORATORIES

IN a preface to the seventh annual report of the pharmacological laboratories of the Pharmaceutical Society of Great Britain, Dr. J. H. Burn, the director, says that the publication of the new revision of the British Pharmacopœia may be held to mark the completion of the first period of the laboratories' activities. During the seven years which have passed a great deal of the research has been directed to pharmacopœial problems, and the examination of manufacturers' samples has provided experience which has been available to those responsible for the biological methods introduced into the Pharmacopœia. In the new Pharmacopœia there are no less than 27 monographs which deal with animal products or with substances requiring biological tests, while the biological methods in the appendix occupy nearly 40 pages. Since the Pharmacopœia is essentially a book for the use of the pharmacist, the figures indicate how far these new remedies have entered his sphere of work. Seven years ago the lack of familiarity on the part of the pharmacist with these substances would have made it difficult to introduce so many into the Pharmacopœia, and Dr. Burn believes that the establishment of the laboratories has played a part in changing this position. The laboratories have been the means of giving the pharmacist a growing acquaintance with biological methods and with the principles which underlie them. Gradually a closer connexion between pharmaceutical and medical science is being gained, which was impossible so long as the pharmaceutical outlook was directed to chemistry only, and not to biology also.

ANNOTATIONS

THE CHEMISTRY OF CARCINOGENESIS

IT sometimes happens that investigations proceeding along different lines converge quite unexpectedly. The latest developments in the chemistry of carcinogenesis are a case in point. First, the patient work of organic chemists on the chemical constitution of cholesterol and allied substances has led to the provisional construction of a constitutional formula whose skeleton—if one may use the term—is a combination of four rings of carbon atoms. This ring system is completely saturated, each carbon atom having all its free valencies combined with hydrogen atoms. Secondly, work on the sex hormones has brought about the isolation of the follicular hormone, œstrin, which is capable of inducing an œstral cycle in castrated animals; and the suggestion is made that it is derived from the sterols by a process which involves a partial loss of hydrogen atoms with the formation of a benzene ring in the skeleton of the four rings of carbon atoms. Hitherto these views on the constitution of œstrin have been derived solely from analytical data accumulated on naturally occurring crystalline œstrin; but striking support of their correctness has been provided from the purely synthetic aspect by Mr. J. W. Cook, D.Sc., of the Cancer Hospital, and Prof. E. C. Dodds of the Middlesex Hospital, and their co-workers, whose description of the œstrogenic activity of a ketotetrahydrophenanthren has already been mentioned in these columns. Thirdly, we have the investigations of Prof. E. L. Kennaway and his colleagues of the Cancer Hospital, who have synthesised a number of pure organic compounds capable of inducing cancer when applied locally to the skin. Here again consideration of the known chemical constitution of these carcinogenic substances has indicated the possibility that they are formed from the sterols present in the cells by an abnormal metabolism involving a similar process of dehydrogenation.

Now both œstrus and carcinogenesis have as one of their essential features cellular hyperplasia. It has been found, too, that the injection of coal-tar which can induce cancer also produces œstrus. The next step was therefore to test whether the several pure organic substances of known carcinogenic activity are capable of inducing œstrus. It was found that two of the most potent carcinogenic compounds, 5 : 6-cyclopenteno-1 : 2-benzanthracene and 1 : 2-benzpyrene, are capable of exciting œstrus. In addition several other pure organic substances, not identical chemically with œstrin, have been prepared synthetically which produced œstrus. This interesting story is told very briefly in two letters to *Nature* (Jan. 14th and Feb. 11th) by Dr. Cook and Prof. Dodds. Their experiments show that there are a number of pure organic substances which can induce œstrus, as there are a number of pure organic substances which can induce carcinogenesis, and that some of these substances are both œstrogenic and carcinogenic. Experiments are now being undertaken to show whether œstrin itself has carcinogenic power.

These findings lend strong support to the suggestion of Prof. Kennaway and Dr. Cook that carcinogenic substances can be formed from the sterols of the cell by an abnormal metabolism; but it must not be concluded that this affects the pathological conception of cancer as being at its inception a local disease. Sterols are present in every cell, and it is quite conceivable that when a sharply localised group of cells is placed under abnormal conditions they may locally produce abnormal products of sterol metabolism.

INSULIN FOR THIN PEOPLE

BECAUSE of its action in aiding the utilisation of carbohydrate and indirectly the metabolism of fat, insulin has been used experimentally in the treatment of a large number of conditions other than diabetes, of which the marasmus of infancy and tuberculosis are examples. Dr. Harry Blotner, writing from the medical clinic of the Peter Bent Brigham Hospital, Boston, reports[1] the results of treatment with insulin in 19 subjects (7 men and 12 women) who had been chronically underweight for years but were otherwise physically healthy. In all but one case previous attempts to gain weight by dietetic and hygienic means had been made and had proved unsuccessful. During the investigation the patients were recommended to eat a liberal unmeasured diet. The dosage of insulin given was in most cases 10 units three times a day, 20 to 30 minutes before meals; in two cases 10 units were given twice a day, and in three 15 to 20 units were given three times a day. The periods over which insulin was administered varied from 1 to 12 weeks; records were kept of the weight and general condition of the patients before, during, and after insulin therapy, and in seven cases estimations were made in addition of the red cell count, blood-sugar level, blood-urea and non-protein nitrogen concentrations, the basal metabolic rate, and the phenolsulphophthalein excretion. It was found that each of the patients began to gain weight at once when insulin injections were started, and that the gain was either moderately rapid and continuous throughout the period of treatment (sometimes continuing after the injections had been stopped), or else the gain in weight was at first rapid and subsequently became stationary irrespective of whether insulin was continued or not. In 13 cases the weight remained constant or went on increasing after the omission of insulin during periods of observation varying from 6 weeks to 14 months, while two patients lost eight and five pounds of the weight gained within the succeeding six months. The total gain in weight varied from 4½ to 31 lb., the added fat being as a rule distributed generally over the face, neck, breasts, abdomen, back, and buttocks. Blotner emphasises the tonic effect of the treatment and the improvement in the sense of well-being experienced by every patient. The red cell count showed an average increase of 400,000 after the administration of insulin, and the circulating blood volume an average increase of more than 10 per cent. during this period, the latter increase affecting plasma and corpuscles proportionately. This finding is regarded as evidence against the increase of weight being due to œdema; in addition, the relation between water intake and output was found to remain unchanged during and after insulin therapy in those cases examined, while in no case was there any diuresis after leaving off insulin. There seemed to be little danger of hypoglycæmia when the patients were provided with a liberal diet. It was striking that 6 of the 19 subjects showed local skin hypersensitiveness to insulin at the site of injection from one to six weeks after the beginning of treatment—a high incidence of the sign considering its comparative

[1] Jour. Amer. Med. Assoc., Jan. 14th, p. 88.

rarity in diabetics. Blotner regards the increase in weight as being due to improved absorption and assimilation, and to the increased intake of food (suggested by the study of the nitrogen excretion in the urine) brought about by the tonic action of the insulin, and possibly to some extent by the psychological effects of treatment.

SIR JOHN ARTHUR THOMSON

Sir (John) Arthur Thomson, for 30 years professor of natural history in the University of Aberdeen, was probably the writer best known to the public as an interpreter of zoology from its bases to its multiple phenomena. He was a great teacher, and made a mark early in his career by his instructional courses on biology at the Edinburgh medical school, while his Gifford Lectures, delivered before the University of St. Andrews in 1915, proved him to be a profound thinker with a broad philosophic outlook. It is possible that the profuseness of his contributions to popular literature rather obscured than revealed his scientific qualifications; if this has been so an injustice has been done to the value of his work. His popular disquisitions over a great range of natural history were thoroughly grounded on learning and experience, and the ease of style and simplicity of doctrine were invaluable qualities for an appeal to public attention. The number of persons to whom the simple and even the elaborate phenomena, illustrating the story of life, have been made comprehensible by his voice and pen must be enormous, and the man who thus made straight the paths of science for adventurers into a difficult country was a public benefactor.

SIGHT TESTING AND DISPENSING

Is it or is it not to the interest of the whole community that the prescription of glasses for errors of refraction should be in the hands of qualified medical men and women? For many reasons we believe that it is. Opticians are divided into two sections: the majority who test the sight of all who desire it, and rely upon the sale of spectacles for their profit; and the minority who agree not to test the sight or prescribe glasses but to confine themselves to the dispensing of surgeons' prescriptions. The customers of the first section comprise the majority of the general public, including most of the insured persons entitled to ophthalmic benefit, and the profits of these opticians depend upon the number of customers they can attract and of glasses purchased. Appealing as they do direct to the public, advertisement in its various forms is one of the essentials of commercial success. Dispensing opticians, on the other hand, depend mainly on the recommendation of ophthalmic surgeons, whose prescriptions are quite useless unless they can rely on their being accurately dispensed in well-fitting frames. According to a latter recently circulated by the Association of Dispensing Opticians, the proportion of patients dealt with by the prescribing opticians to those bringing prescriptions from qualified surgeons is about six to one, and the tendency at present is for this preponderance to increase. The National Ophthalmic Treatment Board, which was set up through the coöperation of the dispensing opticians with the British Medical Association some three years ago, with the object of providing specialist aid for patients to whom an ordinary fee is prohibitive, has had a certain amount of success, and there is now a fairly wide choice of opticians, not only in central, but in greater London and in the provinces, who decline to do any eye-testing at all.[1] It is a regrettable fact, the letter states, that a large number of surgeons still send their patients to sight-testing opticians and not to the local dispensing optician to have their glasses made up. The more ambitious section of the sight-testing opticians, represented by their journal *The Optician*, have for years been endeavouring to qualify themselves, not only to deal with errors of refraction and muscle balance, but also to recognise such conditions as cataract and glaucoma. If they succeed in their endeavours to achieve State registration the distinction between ophthalmic surgeons or "oculists" and opticians, already found sufficiently hard to grasp by the large public, will inevitably become still harder. All ophthalmic surgeons who believe in the importance of keeping the treatment of visual defects of whatever kind in medical hands should take these facts to heart.

OPIUM-SMOKING IN THE FAR EAST

It is reported from Rangoon that the Burmese Government suffered their first defeat in the Legislative Council on Feb. 11th when the Minister for Forests moved that the draft agreements, adopted by the Opium Conference at Bangkok in November, 1931, should be ratified so far as it applied to Burma. The motion, which does not appear to have been debated, was defeated by 30 votes to 23. According to the commission of the League of Nations which visited the Far East there are more opium eaters than smokers in Burma. The smokers are chiefly Chinese. In Upper Burma all consumption of opium by Burmans is illegal, but in Lower Burma there are many registered and unregistered addicts. "In 1924 the Government decided to register all opium-smokers in order to give effect to the stipulations of the Hague Opium Convention which obliged Governments to take steps for the total suppression of opium-smoking, but carried no such obligation with regard to the eating of opium." It will be remembered that at the Hague Opium Convention of 1912 the contracting Powers pledged themselves to bring about the gradual and effective suppression of the manufacture of smoking (or prepared) opium, and to prohibit its import and export either immediately or as soon as possible. The Geneva conference of 1925 by a protocol relaxed these requirements, and postponed the suppression of smoking opium until not more than 15 years from a date when a commission should have decided that the illicit export of the drug from producing countries no longer constituted an obstacle to the reduction of opium-smoking in consuming countries. A commission which was set up in 1928 and reported in October, 1930, was instructed to inquire as to the situation in the Far East, the measures taken to carry out the agreements of 1912 and 1925, and the difficulties which the illicit traffic presented to the fulfilment of these obligations. That commission fixed no date from which the 15 years of grace were to run, but it arrived at the conclusion "that the limitation and control of poppy cultivation would alone assure the total suppression of opium-smoking." It also pointed out that in some Far Eastern territories opium provided a source of revenue for balancing their budgets, "sometimes as much as one-third of the total revenue being obtained from opium." In November, 1931, a conference held at Bangkok drew

[1] A list of these can be obtained from the Society of Dispensing Opticians, 1, High-street, Marylebone, London, W.1.

up an agreement and final Act intended to supplement the Geneva agreement, after reviewing the position and considering "what further measures can be taken to bring about the suppression of the use of opium for smoking?" These new agreements set up Government monopolies in opium, provided for registration of smokers and rationing supplies, for opening a special opium account showing the revenue and expenditure, and for the treatment of addicts. The conference also concluded "that no radical measures for the suppression of the practice of opium-smoking are practicable while the production of opium continues on an enormous scale." This obvious conclusion lends force to the preparations which are on foot at Geneva for achieving the limitation of the production of the opium poppy and the coca leaf to the amounts required for medical and scientific purposes.

STAINLESS STEEL IN DENTISTRY

THE high price of gold has materially affected the dentist, who has always used this metal in the making of various appliances used in the mouth as well as for filling teeth. Hence much interest is being taken in the suitability of stainless steel for dental appliances, and it seems likely that in time this metal will largely replace precious metals in the construction of dentures. The first effort in this direction was made in Germany during the war.[1] The firm of Krupp experimented in the use of stainless steel with much success, and since then this metal has been widely used with excellent results. At first it was found difficult to strike up steel to the shape of the mouth, on account of its refractory nature as compared with gold. But Krupp's have a laboratory where models of mouths are sent with instructions from the dentist; the steel plate is struck up to the design marked out and tags are attached to it to which the vulcanite supporting the teeth adheres; and the dentist is then able to proceed with the remaining stages in the making of the denture. In this country progress in the use of steel has not lagged far behind, and a large number of steel dentures have been made and have proved highly satisfactory. The advantages of steel are its lightness, strength, and cheapness. It is not possible to cast the metal, as is often done with gold, so that the adaptation to the mouth is not as close. But in suitable cases the retention appears to be good. One of the difficulties hitherto has been the attachment of tags or bands to plates, since soldering is difficult and the joint not always secure. For this reason the use of steel for orthodontic appliances has only been tried tentatively; for in such appliances it is essential to be able to solder springs to move the misplaced teeth. But the introduction of spot-welding by electricity seems likely to overcome this serious defect. De Coster, of Brussels, has devised an apparatus capable of effecting this, and in this country F. I. and W. I. Robertson[2] have also evolved a satisfactory technique for the purpose, so that it may now be said that the last obstacle to the use of stainless steel for many purposes in dentistry has been overcome. For orthodontic purposes this material seems to be ideal. It is elastic, springy, non-tarnishable, and can be drawn out into wires of any gauge, while its cheapness is such that a supply sufficient to last the dentist his whole professional life can be bought for a few pounds. There is no doubt that gold must still be required for various purposes, but before many years stainless steel will probably have replaced precious metals for dentures and orthodontic appliances. This will be a definite advantage both to patient and dentist.

[1] See THE LANCET, 1928, i., 1292.
[2] Brit. Dent. Jour., Feb. 1st., p. 107.

ANÆSTHETICS ABROAD

A PAPER in the January issue of the *British Journal of Anæsthesia* describes the prevalent methods of anæsthesia in France as demonstrated by the answers to a questionnaire circulated by the author, Dr. Flexer-Lawton, in coöperation with Dr. Desmarest, chief surgeon of the Ambroise-Paré Hospital, Paris. The most remarkable fact that emerges is the little progress that the employment of gas-and-oxygen appears to have made hitherto in that country. This is no doubt only a natural corollary to the comparatively backward state of France—as of other continental countries—as regards specialists in anæsthetics. There are scarcely any men in these countries comparable to the large body of practitioners in this country who hold the post of anæsthetist to a big hospital and devote all or almost all of their professional activity to giving æsthetics and teaching others how to give them. Consequently any method which requires much practice or involves the use of complicated apparatus makes little appeal to those giving anæsthetics abroad, for they are for the most part men whose ultimate ambition is not to give anæsthetics at all but to act as surgeons. Another result of this state of affairs is the preponderance of local over general methods; for the local analgesic does and preferably should remain in the hands of the surgeon. Forty-two of those who answered the questionnaire expressed a preference for ether, 42 for Schleich's mixture (a combination of ether, chloroform, and ethyl chloride), and 11 for chloroform. Naturally most of those who answered made it plain that they did not use solely their favourite anæsthetic but exercised a certain amount of selection according to the requirements of individual patients. The use of avertin seems to have achieved a certain amount of popularity among French surgeons, but with this exception we find little mention of any of the "basal narcotics" in the article. Dr. Flexer-Lawton concludes with the pious wish that in a little while there will be in France both anæsthetic journals and anæsthetic schools.

THE TREATMENT OF SARCOMA OF BONE

THE treatment of sarcoma of bone offers a problem difficult of solution, for it is notorious that whatever measures are adopted the chances of cure are exceedingly small. Discussing the question with reference to sarcomata arising in the neighbourhood of the knee-joint, H. J. Laméris[1] has recently stated that of his own cases the proportion surviving for as much as two years after operation (amputation or disarticulation) is less than 25 per cent. The growth tends to spread longitudinally in the medullary cavity when once this is invaded; hence, local removal is apt to be followed by local recurrence. The great obstacle to cure is however the well-known tendency of bone sarcomata to undergo metastasis to the lungs. Disarticulation as an alternative to local removal is not an operation to be lightly undertaken when it is remembered that in most cases it is useless as a curative measure, since the lungs are already infected. With regard to treatment by means of X rays or radium, Laméris points out that, although sufficient time has not yet elapsed for a definite conclusion to be reached, the

[1] Laméris: Nederlandsch Tijdschrift voor Geneeskunde, 1932, lxxvi., 5818.

results so far reported are not encouraging. While locally the initial effect of treatment is often marked, growth usually recommences after a short time despite continued applications, while the problem of pulmonary metastases has also to be faced.

Laméris holds that early and radical operation is the best procedure, since on rare occasions a cure has resulted. It may be argued, also, that even if cure is not to be expected the patient's condition, both physical and mental, may be so much improved by removal of the primary growth as to justify operation. The psychological effect of a non-possumus attitude on the surgeon's part may be profoundly depressing; and by the mere fact that something has been done for him the patient's life may be rendered much more tolerable, even if it is not lengthened. It does not, however, follow that so mutilating an operation as disarticulation is the best measure. Many surgeons advocate less radical procedures, such as free local removal followed by grafting, on the ground that if metastasis has not already occurred this will be sufficient, while if it has occurred no operation is of any avail. The decisive factor in prognosis is the stage, early or late, at which the patient comes under treatment.

PSEUDOMENSTRUATION

THE histological alterations in the uterus and ovaries during the sexual cycle were first worked out on the human female, and largely through the work of R. Schröder it became evident that ovulation was limited to the intermenstrual phase. As a result, gynæcologists accepted the view that menstrual bleeding was always preceded by ovulation. Later, however, G. W. Corner and others found that in monkeys (*Macacus rhesus*) cyclical bleeding often occurs in the absence of ovulation; and C. Mazer and A. J. Zizerman [1] now claim that they have demonstrated anovular bleeding in women. In macaques such "pseudomenstruation" consists of disintegration of what is called the "interval" type of endometrium; according to the views quoted in our leading article of Jan. 21st (p.146) this "interval" endometrium has hypertrophied under the influence of œstrin but has never undergone a pregestational stage under the influence of a corpus luteum. Mazer and Zizerman base their belief in human pseudomenstruation on three pieces of evidence. In the first place, it has sometimes happened that at abdominal operations on regularly menstruating women who were at the end of the menstrual cycle no corpus luteum was seen in the ovaries. Secondly, they have found that in these cases the female sex hormones were absent from the circulating blood before menstruation. Thirdly, they state that in a series of 41 cases of functional sterility, scrapings from the uterus of 12 patients had the structure of an interval endometrium without premenstrual—or rather pregestational—hypertrophy, although they were taken shortly before menstruation was due. They imply that in cases of this kind the sterility can be explained by assuming absence of ovulation and replacement of normal menstruation by anovular cyclical bleeding. In this country, at least, little reliance is placed upon the demonstration of a corpus luteum in the ovaries by inspection alone; it is a well-known experience that often a corpus luteum can only be demonstrated by incising the ovaries. Again, there is not the same confidence about the female sex hormone test as there seems to be in America. The third piece of evidence they bring forward, however, is much more important, and further work is immediately required to corroborate these histological findings. They are in direct opposition to those of Schröder in Germany and of Wilfred Shaw in this country.

[1] Amer. Jour. Surg., 1932, n.s. xviii., 332.

LORD SYDENHAM

THE public career of the late Lord Sydenham is so well known that no comment upon it can be required for the information of our readers. A great scientific soldier and military administrator he sat on Lord Esher's Committee on War Office Reconstruction and later proved himself an admirable governor of Bombay. But he had a direct and important connexion with the medical profession through his acceptance of the position of chairman of the Royal Commission on Venereal Disease appointed in 1913 by Mr. Asquith. Here his comprehension of the difficult medical and social problems that had to be dealt with proved of eminent service, and as a result he became chairman of the National Council for Combating Venereal Diseases (as the British Social Hygiene Council was first entitled). Here he found the work hard and sometimes distasteful, but he proved himself an excellent chief.

RESEARCH SCHOLARSHIPS IN HÆMATOLOGY

THE Lady Tata Memorial Trust was founded in April of last year by the late Sir Dorabji Tata, of Bombay, in order to promote the advancement of medicine by research into the diseases of the blood, with special reference to the leukæmias. Research scholarships and fellowships, and grants in aid of research work, are to be given in part to Indians and institutions in India, and in part to workers in other countries. Two scholarships, each of the value of £400, will be open for award in June, 1933, to men or women in the British Commonwealth, exclusive of India, for research work on blood diseases, with special reference to leukæmias. Each will be tenable for a year, from Oct. 1st, and renewable up to a normal maximum tenure of three years. The scholarships will ordinarily be awarded on a whole-time basis, but a candidate holding a part-time teaching post may be allowed to retain this if this will not prevent him from giving his chief interest and energies to the research. Applications in proper form must reach the secretary, Dr. H. S. Patel, Lady Tata Memorial Trust, Capel House, 62, New Broad-street, London, E.C.2, before April 15th.

TRAINING IN MENTAL HEALTH FOR SOCIAL WORKERS

IN our advertisement columns last week appeared an invitation from the London School of Economics and Political Science to social workers to apply for admission to a one-year course of theoretical and practical training in mental health. Substantial scholarships are available to successful candidates, and the obtaining of a certificate to knowledge of the principles of social science makes a sound introduction to a career that is useful alike to those who follow it and to the public. The training in mental science will be directed towards the qualification of social workers to help in clinics for the treatment of adult mental patients, and for child guidance; indeed, where mental behaviour constitutes the difficulty, the social worker, with the equipment to be obtained at the school, should be prepared to cope with it. Applications for scholarships should be made before May 1st to the secretary of the London School of Economics (Houghton-street, Aldwych, London, W.C.2) who will furnish further information.

SPECIAL ARTICLES

ESSENTIALS OF A NATIONAL MEDICAL SERVICE

ON Feb. 3rd Sir HENRY BRACKENBURY, chairman of the council of the British Medical Association, addressed a large meeting at Brighton on the Essentials of a National Medical Service. The chair was taken by Dr. J. O. SUMMERHAYES, and the meeting was arranged by the local division of the B.M.A.

Sir Henry laid down four conditions for any national medical service, namely :—

(1) The service must offer scope and opportunity for the achievement of the three-fold aim of modern medicine: curative, preventive, and constructive.
(2) Any service of the kind should afford opportunities for clinical and laboratory research.
(3) The service should be based upon the provision of a general practitioner for every individual, and the relationship between doctor and patient should be, as in private practice, primarily, if not solely, between those two, with no one else intervening, and should be a free relationship—free both in the sense that the doctor was not confined to some limited or prescribed system within which he must treat his patients, and in the sense that there was free choice both of patient by doctor, and, especially, of doctor by patient.
(4) The service must be a complete one, providing not only general practitioner service, but consultant and specialist services, various ancillary services, and necessary hospital accommodation.

He went on to say that the medical profession was in favour of providing this national medical service only for those who could not provide what they required for themselves. Its attitude in this matter was determined not by monetary considerations (for it was conceivable that an agreement might be negotiated on the widest basis which would be equally remunerative to the doctors), but it was because of their jealousy for the preservation of the fundamental conditions in the relationship of doctor and patient, which were completely preserved in private practice. As to the method of provision, the profession would favour an extension of the compulsory insurance system, partly because experience had shown that within that system it was possible to preserve the fundamental conditions of relationship just mentioned, and also because under that system a certain amount of experience had already been accumulated. He emphasised the desirability of unification in administration of the health services of the country, especially in bringing together the machinery responsible for public health and poor-law administration, and that responsible for the insurance medical service. In all these questions of administration the medical profession should be consulted, represented to some extent upon the authorities concerned, and trusted as completely as possible in matters of internal professional discipline.

Turning to institutional provision, he pointed out that hospitals were shifting away from the old voluntary basis to an increasing basis of self-support. It was very necessary, in view of this development, that the services of the medical and surgical staff should be recognised financially in some form or other, and a hospital staff fund was one of the features of the modern hospital conceived of as a piece of machinery within the national medical service. In conclusion, he referred to certain other ideas which the profession would like to see carried into effect. One of these was the employment as far as possible of the members of the local medical profession by local authorities in discharging their functions towards certain classes of individuals or in respect to certain diseases. Again, practitioners should be brought into closer relationship with, or be considered an integral part of, the public health service of the locality; the services should not be walled off from one another. The present period during which fresh enterprise was held up on the ground of economy constituted, he said, a breathing-space during which it was a very good thing to explore certain ideas and to endeavour to obtain harmony and agreement as far as possible, so that when a scheme was brought forward it might move to fruition with the widest possible consent.

THE TSETSE FLY

IN 1925 a Tsetse Fly Committee was set up as a subcommittee of the Committee of Civil Research (now absorbed into the Economic Advisory Council). This body was charged to prepare a practical scheme of British inquiry and action aimed at controlling the tsetse fly as a carrier of human and animal trypanosomiasis and at a preventive and curative treatment of that disease in man and animals. It has now issued its report.[1] A preliminary report published in 1925 recommended that research should be centralised under a trypanosomiasis committee and assisted by parliamentary and local government grants and by subscriptions. This proposal did not, however, meet with the approval of the officers administering the various territories, and since 1927 the Tsetse Fly Committee has itself acted as an advisory committee on human and animal trypanosomiasis.

It is now established that nagana (trypanosomiasis of animals) is caused by any of three trypanosomes: *T. brucei*, *T. congolense*, and *T. vivax*. Often all three are found together in one animal, but *T. brucei* is the important agent in horses and dogs, and *T. congolense* and *T. vivax* in cattle, the former being the more virulent. The course of the disease varies very greatly, according to the infective agent, to the host, to the conditions, such as rain, food, work, and intercurrent disease. Different strains vary widely in virulence. Besides the recognised acute, subacute, and chronic forms of infection there is a latent or dormant form, characterised by an absence of anæmia and other signs of ill-health. It is common in all the East African territories; in Northern Nigeria 20–30 per cent. of cattle show it. Host and parasite have attained an equilibrium which may last throughout life, but is easily upset by a change in conditions of food and work and by exposure to such a disease as rinderpest. This "premunity" may be to local strains of trypanosome only, and it is more easily acquired by the young than by the adult. At present, authorities do not know whether the "immune" herds are really immune or whether their resistance is only to local strains or is a "premunity." Some preliminary cross-breeding work has suggested that resistance is transmissible.

DIAGNOSIS AND TREATMENT IN ANIMALS AND MAN

Recent work has shown more and more the difficulties of diagnosis. Inoculation of Halarsine and Antimosan causes an increase in the number of circulating parasites, and may prove useful. Complement fixation and the adhesion phenomenon are

[1] Economic Advisory Council. Tsetse Fly Committee Report. London: H.M. Stationery Office. 1933. Pp. 27. 6*d*.

very reliable for some forms, and could probably be adapted for all, but require the facilities of a laboratory. The formol-gel test is four times as accurate as microscopic examination for the *T. soudanense* infection of camels, in which the mercuric chloride test is also very delicate and accurate, though it is unreliable in other animals. The success with the camel encourages the hope that equally reliable methods may be found in other animals, but at present reliance has usually to be placed on microscopic examination of blood films and gland smears.

Many drugs have been tried without success. Tryparsamide has little curative value but will protect against *T. vivax* long enough for cattle to be driven safely through a fly belt. The efficacy of Naganol depends on the strain; it is effective against *T. brucei* and *T. soudanense*. Antimony tartrates are useful for *T. congolense* and *T. vivax*, but most of the animals so treated are "premunised" rather than cured; these drugs are cheap, but are not without dangers such as parenchymatous hepatitis. Antimosan seems to have the properties of the tartrates without their drawbacks, but it is more expensive.

Other than drugs and fly eradication, the methods of control of animal trypanosomiasis are: breeding immune herds, isolating infected animals quickly, dipping, chemical prophylaxis, immunisation, and the prevention of rinderpest. Losses in a herd can be kept very low if the disease is diagnosed early and the victims removed at once. Repeated arsenical dipping retards the development of the infection, but dipping is of little prophylactic value. Trypanocidal agents can protect animals for a very short period, but the method has not otherwise offered much promise. Nor have attempts at immunisation yielded satisfactory results up to date, but it seems probable that animals could be "premunised" against the two or three species of trypanosome with which they are likely to come in contact. It has been urged, however, that the existence of large "premunised" herds would favour the multiplication of flies and provide a reservoir of infection.

IN THE TREATMENT OF HUMAN TRYPANOSOMIASIS

The two drugs chiefly studied since 1925 are Germanin (Bayer 205) and Tryparsamide. The former is curative in the early stages of *T. gambiense* infection, but less certain with *T. rhodesiense*. The present tendency is to give germanin first and a course of tryparsamide later, but tryparsamide is the drug of choice if the central nervous system is implicated; it can be given intravenously, intramuscularly, or subcutaneously. So satisfactory are the results that Congo natives have now as much confidence in the treatment of sleeping sickness as in that of yaws. Germanin has an additional prophylactic value; it seems definitely to prevent the development of an infection. One authority recommends a quarterly dose of a gramme.

Since animals may form a reservoir of infection for *T. rhodesiense*, an important preventive measure in Tanganyika is bringing the natives out of fly-infested forests and establishing them in large clearings.

CONTROL OF THE FLY

Over large stretches of Africa no economic progress will be possible until the tsetse-fly problem has been solved. In extreme cases at present it may be necessary to evacuate the population and leave the fly in possession. The cost of extensive bush clearance is prohibitive, and reclamation by settlement has a limited application, as the bush rapidly springs up again if the clearings are not cultivated. A cheap and effective way of poisoning trees has been discovered, but some varieties are not susceptible to it. More and more ways of killing trees are being evolved, and properly organised grass fires will eradicate the fly for several years. Tsetse areas are sometimes divided into manageable blocks by strip clearings, and in Tanganyika experiments are being made with game barriers. Some tsetses cannot live in dense thicket, and fly barriers can be made by planting broad strips of thicket; this is a very promising development. Satisfactory progress has also been made in catching the flies with hand nets and traps.

There is no royal road to the elimination of the tsetse fly; the measures required differ according to the kind of fly, the nature of the country, and the habits of the natives. Most valuable pioneer work has been done in Tanganyika, where 70 square miles of tsetse-infected bush have been cleared and reoccupied. Throughout another 80 square miles flies have been eradicated or greatly reduced by grass fires, and a corridor clearing has given access to a fine stretch of 150 square miles of grazing. The committee looks forward confidently to the time when it will be possible in suitable areas to eradicate the tsetse at a relatively small cost. The work, however, needs a special staff of trained men. Research for improved methods is a problem of great urgency and practical importance, and the committee hopes that every effort will be made to provide the necessary funds for this work, the successful conclusion of which is vital to all the fly-infested territories of Africa.

MEDICINE AND THE LAW

Hints for Lunacy Certification

FOR doctors who are called upon to perform the duties and incur the risks of lunacy certification a catechism has been compiled and published by one who has experience of the pitfalls of this class of work.[1] The startling amount of damages awarded in the Harnett *v.* Bond litigation is a reminder that the risks are serious. A practitioner who wishes to be on the safe side of the law might do much worse than study the 17 questions which make up the catechism. They are too long to learn by heart but a duplicate set of them is conveniently printed on pages intended to be detached and carried in the pocket for quick reference. If, after studying them, the practitioner can feel that his certificate meets all their requirements, he need fear no verdict in the years to come. Here, for a sample, are questions 7 and 8 in the series. "Have I certified this patient on hearsay evidence or (as I should) only on what I observe myself? Have I made every endeavour to prove that the facts communicated by others are facts?" Doctors who approach the unwelcome task of certification without the confidence of experience will find it worth while to take trouble. It is a mistake to suppose that the Mental Treatment Act of 1930 gave them immunity. The protection given by the Act was a matter of procedure rather than of principle. In cases of the Harnett *v.* Bond type the plaintiff has to prove either bad faith or want of reasonable care. He cannot now proceed with his claim unless the High Court is satisfied that there is "substantial ground" for his allegation of bad faith or want of reasonable care. But any sort of claim, if stated *ex parte* by eloquent

[1] Safeguards in Compiling a Certificate for the Insane. By Horace B. Hill, M.R.C.P. London: Arthur H. Stockwell, Ltd. Pp. 31. 2*s.* 6*d.*

counsel for the plaintiff, sounds substantial until the other side can be heard. The medical profession must not be over-confident of the safeguard which the Act provided; it is a preliminary obstacle which a plaintiff may manage to surmount. Juries, as the author of the catechism truly says, are reluctant to find anyone insane. Mental patients seem to find it easy to produce abundant evidence to prove themselves to have been at all times of sound mind. One might add that the certifying doctor can be certain that members of his own profession will go into the witness-box to attack with their *ex post facto* criticisms the opinion he formed when examining the patient long ago.

A Lunatic Wandering at Large

Although juries dislike finding verdicts of insanity, they feel (like the rest of the general public) a horror of the dangers of the escaped lunatic. Such dangers, when they occur, deserve publicity; they help to remind the ordinary citizen of the protection which the certifying doctor supplies. On Feb. 4th at Willesden police-court a story was told of a mental patient, found at large, who was brandishing a knife and threatening murder to his wife. The man, it seems, had been certified insane and had been sent to the county mental hospital, being released therefrom on his father's promise to send him to a private institution. From the latter he had been allowed out on parole to live with his father at Mitcham. When he visited his wife and children at Willesden and put them in fear, a warrant was obtained for his arrest. But on the following day the warrant officer had to apply for the withdrawal of the warrant, which had been issued on a misunderstanding of the law. An insane person cannot commit the offence of murder or attempted murder or any other offence. The warrant officer explained to the court that the case was one for the Lunacy Commissioners. Police officers in the district, although they had no power to arrest him, had been warned that the patient was a dangerous lunatic who, if seen, should be detained pending the decision of the authorities. Section 15 of the Lunacy Act directs constables and relieving officers who have knowledge that any person (whether rate-aided or not) wandering at large in their district is deemed to be a lunatic to apprehend him forthwith and take him before a justice who must then call in a medical practitioner and, after examination and inquiry, make any necessary order for the patient's detention in an institution for mental patients. The wife's solicitor protested against his client's being left unprotected against a possibly murderous assault. He asked that at any rate the warrant should not be withdrawn until he had an opportunity to go to the High Court for a mandamus. The magistrate allowed the warrant to remain from the Saturday morning to the following Monday, and the situation has presumably been met by re-establishing control and supervision over the patient.

THE MANCHESTER HOSPITALS.—Manchester Royal Infirmary last year admitted 11,465 in-patients, and treated 48,998 out-patients, of whom over 29,000 were accident cases. The year closed with a deficit of £8423; legacies were £11,000 less. The proposed new wing containing 100 pay-beds is estimated to cost £90,000.—Last year there were 2585 in-patients at Manchester Royal Eye Hospital, and 10 more beds have been added, making a total of 160. There were 28,422 out-patients, an increase of 920, and 137 paying patients.—Several of the Manchester institutions are being fitted with talking-film apparatus, notably the epileptic colony at Langho, and the tuberculosis sanatorium at Baguley. The Crossley sanatorium, on the borders of Delamere forest, which is attached to the Manchester Consumption Hospital, has already had a first performance.

BUCHAREST

(FROM OUR OWN CORRESPONDENT)

PROPRIETARY REMEDIES *v.* DOCTORS

Owing to the economic depression the Rumanian medical profession outside the capital, Bucharest, is suffering from unheard-of idleness. Three-quarters of the population are unable to pay for the doctor's services and therefore do not ask for them; the remaining quarter, because money is very scarce, under the influence of mass psychology are trying to save all unnecessary expenses, including of course the payment of a physician. Medical help is sought only when there is great danger or when the patient is already on his death-bed. This unhappy state of affairs is being exploited by manufacturers of proprietary medicines, some of whom are advertising their wares widely, shrewdly enumerating a whole series of indications which will wheedle the last pennies out of the people. Even in the smallest village, in the most unimportant journals, the Laboratoires —— are proclaiming that their products cure arterio-sclerosis, Bright's disease, and almost everything else. This same firm advertises a sandalwood preparation which is supposed to cure gonorrhœa in all its stages, cystitis, prostatitis, and "hypertrophy of the prostate." To such bombastic advertisements even the educated classes fall victim, and thus perhaps delay the proper medical treatment until too late. The Medical Chamber, recognising the damage that such proprietary medicines are doing to the careworn medical profession, is proposing to the Ministry of Internal Affairs that advertisements of such remedies in the newspapers should be censored by a special board appointed by the Ministry of Public Health, under penalties which might be contributed to the fund for the widows and orphans of physicians. The memorandum will argue that it is the duty of the State to protect its subjects from obvious frauds. If a jeweller sells a brass ring and passes it for a gold ring, he is liable to severe punishment. In the same way if a credulous man buys a medicine which is stated to cure hypertrophy of the prostate and it does not, he is cheated and the beguiler deserves just as much punishment as the fraudulent jeweller. The medical profession awaits the decision of the Ministry with great curiosity.

VENEREAL DISEASES IN THE ARMY

A census of venereal patients, be it made with ever so much care, is always incomplete, partly because of the great number of irregular practitioners or quacks who compete with medical men in treating venereal diseases. Owing also to the long duration of these infections, those affected often lose patience and go from one medical man to another, with the result that the same patient appears in the records several times. In the military statistics, however, all these difficulties of the enumeration are avoided and trustworthy data are obtained. According to these, the prevalence of venereal diseases per 1000 men in the army was 69·8 in 1929 and 67·4 in 1930. The amount of syphilis is held to be decreasing, because in 1930 and since that year the soldiers have been examined once a week by venereal specialists, and if anything is found they are sent to special hospitals where they are kept until radically cured. Those suffering from syphilis are recalled every three months for a course of treatment through the first year, and afterwards, for two years, they undergo a blood test every six months.

THE DOCTOR'S DAY

"Come, tell me how you live," I cried,
"And what it is you do!"

XV.—THE HOSPITAL SURGEON

THE life of a hospital surgeon is so varied that in many respects no two days are alike. He pursues a certain routine, which is liable to be sadly upset by emergency calls when these take him out of his town, and other engagements have to be fitted in where best they can be. The contrast of the surgeon's day with that of the established consulting physician is striking in one respect, the surgeon is called upon to do much more work at the teaching hospital, while many fewer medical emergencies occur in hospital practice. A ward round is made by few hospital physicians daily, and seldom occupies more than two hours in ordinary circumstances, but it is quite ordinary for the operation list of the surgeon to involve five or six hours' work. In collaboration with pathological and research departments the physician's time is more fully taken up, but when procedure is dictated by special findings the surgeon may have before him lengthy work still to do, and work that has to be done by a special time. And it is this that puts upon the surgeon the real strain—his time scheme at the hospital and elsewhere is ever at the mercy of emergencies.

Nowadays it is the custom at many hospitals for all members of the staff to do their share of work in the out-patient departments, and an excellent plan it is. The days are past when the assistant surgeon saw out-patients only and did emergency operations, while the work of the full surgeon was confined to in-patients and to operations performed on certain set days. The developments of general and special surgery, first gradually and then rapidly, rendered such an arrangement obsolete. The teaching hospital may now demand four half-days a week from the surgeon; one half-day is spent seeing out-patients, another in a ward round, while the other two are allocated to operations.

During the university term certain lectures and demonstrations have to be given in the medical school. There are also numerous student societies, each of which requires a president every year from among the honorary staff. There are also clubs and societies in connexion with the nurses, the massage students, the X ray students, hospital almoners, and many others, all of which at one time or another welcome—may I say are insistent upon?—the attendance of a member of the honorary staff at their different functions. A large number of subcommittees of the governing body of the hospital consist chiefly of lay members, but these rely in great measure on the judgment of members drawn from the medical and surgical staff. Remembering how much trouble has arisen in the past because members of the governing body have not taken the feeling of their medical colleagues on some essential point before coming to a decision, the surgeon, however busy, feels it his duty to attend the committees of which he is a member, with such regularity as he can make possible.

The following is a picture of a typical day in the life of a surgeon to a London hospital and school, and is written from that aspect; but while any centre of medical training will have its particular features, dependent upon size, locality, and tradition, the surgeon's life will follow much such a pattern.

THE MORNING

Breakfast at 8, a glance at the morning paper and a hurried review of letters, most of which will be duly sorted by the secretary when she arrives an hour later. At 8.30 the car is ready to take me to a nursing home where I see one or perhaps more patients. Perhaps a dressing has to be done, or some stitches taken out; and then a patient at another nursing home, possibly two or three miles away, has to be visited. At 9.30 an operation has to be performed at still another nursing home. Why is such an itinerary necessary? Cannot all the patients be housed in the same nursing home? It would be all to the good of the surgeon if they were, but to-day patients take a pride in choosing their own nursing home. One says: "I want to go into such and such a home because Mrs. X went there and was comfortable and well-looked after"; others have reasons of locality, amenities, and so on to support their private preferences. The question of fees is an important one to-day, although it was often not discussed in advance in the golden pre-war time. The average patient now wants an estimate of the whole extent of his probable expenses before he decides what home he will patronise, and the male patient now is as prudent as the female.

Since the war many hospitals have instituted private wards and I think that these have come to stay. In such wards middle-class patients can be treated for very modified fees, the alternatives being cheap nursing homes or the ordinary public wards. If the private wards in the London hospitals have the effect of causing inefficient nursing homes to close down it is all to the good, since abdominal operations performed in small rooms with poor lighting and equipment cannot be for the benefit of the patient, nor, in such circumstances, can the surgeon do his best work. Operations, except minor ones, should not be performed in nursing homes unprovided with an operating theatre or a lift; it is unfair to the patient, to the surgeon, and to the nurses. However, I must not digress, during a picture of a working day, into a discussion of the difficult situation of the middle-class surgical or gynæcological patient.

The operation, the impending performance of which has been mentioned, begins at 9.45. It may be a radical amputation of the breast for cancer and the operation takes just under the hour, the surgeon being assisted perhaps by his house surgeon who has come from the hospital especially to help. After the operation the relatives of the patient are interviewed and a prognosis is given; the surgeon motors back to his house to see patients. In the intervals letters are dictated to doctors and sometimes to patients. And then come consultations. It is true that some surgical cases do not take up much of the consultant's time, as for instance a hernia. On the other hand, a nervous patient with a thyrotoxicosis may demand nearly an hour's careful study before a decision as to the proper line of treatment can be given. Often arrangements have to be made for the patient to go into a nursing home for further investigation and for a consultation with a physician. Perhaps the practitioner's diagnosis of "chronic appendix" is one which requires to be sifted most cautiously, in order that such conditions as salpingitis, cholecystitis, gastric or duodenal ulcer can be eliminated. It is not possible to calculate the time that will be required for consultations, or what may constitute an average morning, but as a rule half an hour must be allowed for each patient. It is aimed that the last patient should depart by 1.15 P.M., when a light luncheon is followed by the dictation of a few more letters, arising perhaps out of the consultations.

THE AFTERNOON

At 1.30 I am again in my car en route for hospital. On out-patient days patients who have been especially sent up to be seen by their own doctors are taken first. The students who have written clinical notes on these cases read them out and are asked questions about the patients. Diagnosis and the differential diagnosis are discussed and the line of treatment that should be adopted. If the case is an injury to a bone or to a joint it is removed to the X ray department, a skiagram is taken, when a report will be forthcoming in about half an hour. The surgeon who likes teaching gets ample opportunity in the out-patient department,

since, as a general rule, there is more variation in this department than in the wards. Having seen all the new patients, I see a few of the old patients—those who have to be followed up as of special interest. A visit will be paid to the out-patient theatre to supervise the injection of varicose veins and the performance of other minor operations by the students when there should still be time for a grateful cup of tea at 4.30 P.M., when a lecture has to be delivered on some surgical condition. My chief assistant will have arranged for the cases to be demonstrated and have had a series of pathological specimens illustrating the condition set out on the bench. At the end of the lecture a short cinematograph film illustrating the method of operating on this particular surgical condition is shown, and there can be no doubt that teaching through the cinematograph has come to stay.

On the two afternoons devoted to operations the list keeps me busy till 6.30 P.M., or even later. If possible, nursing-home patients are visited before dinner, unless consultations on the way home have been arranged at the last moment. This situation is a good example of the strain of the surgeon's life, already alluded to. The dilemmas cannot be escaped from, but have to be met in accordance with circumstances, as dictated by the respective seriousness of the simultaneous calls upon time. As a rule the public is reasonable; where it is not one must put the best face possible on the situation. Dinner should be the most important meal of the day, taken at leisure, but often an emergency call to a distance, an extra case on the list at the hospital, or a consultation arranged at a late hour to suit the convenience of a patient or a practitioner may interfere with the time-table.

THE EVENING

Medical societies exist in profusion in London; they still continue to multiply, and the doctor is often lured into speaking at an evening meeting when he would certainly advise other people to stay at home and take it easy. But if he has been booked to join in a discussion he must go, and from such interchange of experiences he gains valuable breadth of view. Or he may have to attend a medical board meeting in the evening, held at his own house or that of a colleague; while he may have an examining appointment, compelling him to mark papers for a weary period; and just as he has got settled down the telephone rings, and the car has to be requisitioned in order that he may perform an emergency operation in a cottage hospital to which he is attached. It is true that on journeys such as these he may find an opportunity for thinking about the plans for the morrow, but sometimes the concentration needed cannot be found. On arrival, the patient is seen, and if a diagnosis is made, showing that operation is needed, the patient is given an anæsthetic, the area is prepared and the operation is performed with the coöperation of the local practitioner. The time taken over this operation may be short or considerable, and trouble over the administration of the anæsthetic may complicate matters—one has to be prepared for many things—but sooner or later the operation is completed and, considering everything, the patient is returned to bed in quite a good condition. Where such emergencies occur during the period of examinations, the task of completing the marking of the papers has to be undertaken in the small hours of the morning, as the marks are required for the viva voce examination which takes place in the afternoon of the following day. Of course, I am not here describing an average evening, but am indicating what may occur and have to be provided for. When the emergency operation coincides with the immediate necessity of marking examination papers the position is a particularly trying one.

And there are other things besides urgent professional calls which may bring home to the hospital surgeon that his evening time is not his own to dispose of, though he has many uses to which he wishes to put it. I have indicated, in speaking of the general work associated with his job, the part to be played by the hospital surgeon in the administration of the hospital and the school. These activities bring with them evening work. Articles for medical papers, the hospital reports, and the medical journal of the school may have to be prepared, the reports of subcommittees may have to be drafted or scrutinised, lectures have to be put into shape, calling for the reading of the literature, at any rate, of one's own subject. And a book may be on the stocks. I say nothing of social engagements in the evening outside those of a professional character. Here every one is a law to himself or herself, as far as independence permits, but I have heard what "all work and no play" make of Jack.

The hospital surgeon's life is not a restful one; it is sometimes a hard one, and its material reward is capricious. He never knows what his next case is likely to be, but as new things turn up they provide recurring stimuli. The dilemmas of practice may sorely try him—this is a matter of temperament—but the triumph over them yields compensating satisfaction. He whom the life suits would not exchange it for any other.

THE SERVICES

ROYAL NAVAL MEDICAL SERVICE

Surg. Comdr. F. G. H. R. Black is placed on the retd. list.

Surg. Lt.-Comdr. J. H. B. Crosbie to be Surg. Comdr.

The following appointments are notified: Surg. Comdrs. C. G. Sprague to *Vindictive*; A. G. McKee to *Curacoa*; and A. E. P. Cheesman to *Malabar*, for Bermuda Dockyard.

ROYAL ARMY MEDICAL CORPS

M. S. W. Bisdee and J. Walsh to be Lts. (on prob.).

Lt. (on prob.) M. S. W. Bisdee is secd., under the provisions of Art. 213, Royal Warrant, for Pay and Promotion, 1931.

Lt. (on prob.) G. A. Kane resigns his commn.

ARMY DENTAL CORPS

H. C. Dobbie to be Lt. (on prob.).

INDIAN MEDICAL SERVICE

Lt.-Col. H. E. Stanger-Leathes is apptd. Hon. Surg. to The King, and promoted Bt. Col., vice Maj.-Gen. C. Hudson (retd.).

Col. W. R. J. Scroggie retires.

COLONIAL MEDICAL SERVICE

Dr. K. C. Mackenzie has been appointed Medical Officer at the Gold Coast; Dr. J. R. Forde has been promoted to Senior Medical Officer at the Gold Coast; and Dr. J. F. C. Haslam becomes Chief Medical Officer, Barbados.

DEATHS IN THE SERVICES

The death is announced from Melbourne of Major-General Sir George Cuscaden at the age of 76. Sir George, who during the war was Director-General of the Australian Medical Service, had previously seen service in the Egyptian War of 1882.

MONMOUTHSHIRE ISOLATION HOSPITALS.—Dr. D. Rocyn-Jones, the county medical officer, reporting upon isolation hospital facilities in Monmouthshire, states that "there is not in existence at present a single hospital in the administrative county which can be regarded from all standpoints as satisfying the requirements of the Ministry of Health in the matter of adequate facilities and arrangements for the isolation of the infectious sick." He adds: "It can be definitely stated that the facilities for the isolation of the infectious sick in the administrative county have never been adequate, and perhaps it would be truer to say that they have been woefully lacking, and this lack of provision in many instances has been responsible, in a large measure, for the fatalities resulting from infectious disease." There are 189 beds and 8 cots, whereas on the recognised ratio of beds to population there should be not less than 345. It would therefore be necessary to make provision for 200 additional beds, but probably the population ratio need not be strictly adhered to if some system of pooling could be adopted, in which case it should be sufficient to provide for 120 extra beds. The provision for small-pox patients is satisfactory.

CORRESPONDENCE

A TRIBUTE TO SIR ROBERT JONES

To the Editor of THE LANCET

SIR,—The death of Sir Robert Jones, of Liverpool, has taken from us one of the most distinguished of English surgeons, the creator of modern orthopædic surgery, and the founder of the British school of orthopædics. Many of his colleagues, patients, and friends feel that a last tribute should be paid to his memory, in recognition of his services to the cause of surgery and to multitudes of patients, and to recall his service to the Army during the Great War. Sir Robert Jones was regarded throughout the world as the greatest orthopædic surgeon of all time; it is only fitting that his supreme merit should be recognised in this way, and that his example should constantly be brought to mind as an incentive and encouragement to those who come after.

It is hoped to be able to arrange to include in our benefactions Liverpool, the Royal College of Surgeons of England, and perhaps other bodies with which he was associated, if, as we feel sure will be the case, an adequate sum of money is received in response to this appeal.—We are, Sir, yours faithfully,

DERBY,
Chancellor of Liverpool University; Secretary of State for War 1916–18 and 1922–24.

ARTHUR STANLEY,
Chairman, British Red Cross Society; Treasurer of St. Thomas's Hospital.

HOLBURT J. WARING,
President, Royal College of Surgeons.

MOYNIHAN,
Past-President, Royal College of Surgeons; Chairman, Army Medical Advisory Board.

E. FARQUHAR BUZZARD,
Regius Professor of Medicine, Univ. of Oxford.

W. LANGDON BROWN,
Regius Professor of Physic, University of Cambridge.

J. W. DOWDEN,
President, Royal College of Surgeons, Edinburgh.

FRANK CRAWLEY,
President, Royal College of Surgeons, Ireland.

HAROLD B. FAWCUS,
Director-General, Army Medical Services.

WICKLOW,
President, Central Council for the Care of Cripples.

GEORGIANA BULLER,
Vice-Chairman, Executive Committee Central Council for the Care of Cripples.

WINIFRED PORTLAND.

A. F. LONDON.

ALBERT LIVERPOOL.

H. R. HURTER,
President, Liverpool Medical Institution.

ALFRED GATES,
Lord Mayor of Liverpool.

H. J. W. HETHERINGTON,
Vice-Chancellor, Liverpool University.

HAROLD STILES.

R. E. KELLY,
Professor of Surgery, Liverpool University.

W. I. DE C. WHEELER.
Past-President, Royal College of Surgeons, Ireland.

CHARLES J. MACALISTER.

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President, American Orthopædic Association.

WILLIS C. CAMPBELL,
Past-President, American Orthopædic Association.

DE FOREST P. WILLARD,
Secretary, American Orthopædic Association.

PUTTI,
Bologna.

NOVÉ-JOSSERAND,
President, International Society of Orthopædic Surgery.

MURK JANSEN,
Leiden.

H. A. T. FAIRBANK.

R. C. ELMSLIE.

W. ROWLEY BRISTOW.

G. R. GIRDLESTONE.

HARRY PLATT.

NAUGHTON DUNN.

D. MCCRAE AITKEN.

S. T. IRWIN.

T. P. MCMURRAY.

A. S. BLUNDELL BANKART
President, British Orthopædic Association.

Subscriptions may be sent to Mr. Blundell Bankart at 58, Harley-street, London, W.1.

Feb. 9th, 1933.

THE ADMISSION OF WOMEN TO THE G.M.C.

To the Editor of THE LANCET

SIR,—The letter by Dr. Jane Walker and Dr. Letitia Fairfield, suggesting the desirability of the election of a woman member on the General Medical Council, we feel sure voices the opinion of all medical women. It seems appropiate that as women now share in the work of all branches of medicine, that a place should be found for one of them on such a thoroughly representative body. Candidates are available whose opinion and advice could not fail to be of value in many matters which come within the province of the Council.

We are, Sir, yours faithfully,

RUTH NICHOLSON,
MARGARET JOYCE,
VERA FOLEY.

Liverpool, Feb. 13th, 1933.

To the Editor of THE LANCET

SIR,—I should like to support the appeal of Dr. Jane Walker and Dr. Letitia Fairfield for the election of a medical woman to the General Medical Council. Just as women are now members of the House of Commons and of most public bodies throughout the Kingdom, so it seems only just and natural that there should be at least one on the G.M.C., seeing that they constitute nearly 10 per cent. of the names on the medical register. Previous to each step which has been taken during recent years in the admission of women to public life there have been gloomy prophecies of the disastrous results which would inevitably follow as a result. Not one of these dismal vaticinations has ever materialised; the presence of women on public bodies of the most varied character has been abundantly justified by experience. Similarly, I believe the election of a woman on the G.M.C. would add to the carefulness of its deliberations and to the wisdom of its decisions, and would make it even more representative than at present of every side and aspect of professional life.

Experience in connexion with other medical bodies has already shown that there would be no difficulty in finding a suitable woman candidate.

I am, Sir, yours faithfully,

J. WALTER CARR.

Cambridge-terrace, Regent's Park, N.W., Feb. 10th, 1933.

MASKED HYPERTHYROIDISM

To the Editor of THE LANCET

SIR,—I read with great interest Mr. Cecil Joll's letter in your issue of Feb. 4th. The presence of thyrotoxicosis in association with a thyroid gland which is *strictly* normal in size is difficult to prove. It must, however, be accepted that gross cardiac disturbance may result from thyroid intoxication when the gland is neither visibly nor palpably enlarged even in a very thin individual; this point I attempted to emphasise in my paper. In addition, although there may be no increase in size the consistence of the whole or a part of the gland may be altered, and this alteration appreciated by palpation. If then, as Mr. Joll says, "thyrotoxicosis never occurs in association with a thyroid gland

which is normal in size," in such a case the amount of enlargement must be very small and not capable of assessment from the weight of tissue extirpated.

Further, to quote from Mr. Joll's excellent book,

"The size and weight of the gland under apparently normal conditions are known to vary somewhat widely in different countries, at different ages, under varying conditions of diet, and in different physiological phases such as puberty, adolescence, pregnancy, and so forth."

And finally, pre-operative administration of iodine may alter the weight of the gland.

With regard to the histology of the tissue removed; of my six cases submitted to operation four showed a hyperplasia-involution process, areas of hyperactive tissue being interspersed with areas of involution. In one a densely calcified nodule was present in a gland which showed definite areas of hyperactivity. In the remaining two many involution areas were present but no tissue was definitely hyperplastic. This appearance can be accounted for by the fact that all the patients received iodine treatment prior to operation.

I am, Sir, yours faithfully,

JOHN R. H. TOWERS.

St. Mary's Hospital, W., Feb. 13th, 1933.

THE INDUSTRIAL DOCTOR

To the Editor of THE LANCET

SIR,—As medical officer in charge of a clinic serving the interests of a firm with numerous employees, I also was interested in the day of "An Industrial Doctor," and share Dr. Castellain's regret that the author made no reference to the question of coöperation with medical practitioners and hospitals.

The industrial doctor in a large concern has facilities for diagnosis and treatment, such as X ray apparatus, skilled massage and remedial physio-therapeutic aids, not possessed by private practitioners; he also has behind him his firm's resources to assist its employees in obtaining specialists' opinions, convalescence, and various forms of special treatment. By treating at the factory clinic cases of illness that do not involve absence from work he prevents to a large extent the development of more serious disease, and saves his firm, the patient, and the panel doctor much trouble and loss of time. By coöperation with the private practitioner during an employee's sick absence the industrial doctor is able to assist and expedite recovery and when necessary arrange for light work during the final stage of convalescence. Where, as is the case with my firm, panel benefits are made up to full pay during sick absence, subject to length of service and the factory doctor's satisfactory report, such coöperation is, of course, essential in the patient's interest. Ambulatory accident cases, coming under the provisions of the Employers' Liability and Workmen's Compensation Acts, as well as the various dermatoses, are best treated at the factory clinic, as they can be kept under close medical supervision and seen daily, instead of only once a week as is more usually the case at hospitals or panel surgeries. The value of keeping the injured workman in close contact with his place of employment, and stimulating his desire to resume work by suitable remedial measures will be obvious to all who have studied the problems of industrial psychology.

In practice it is found that fully 99 per cent. of insurance practitioners not only coöperate with, but also welcome the work of the industrial doctor, and appreciate his aid in caring for the health and welfare of the industrial population. There are many other aspects of this work not touched upon by your contributor, doubtless owing to limitations of space, but I am sure he feels, as I do, that few other branches of practice offer such opportunities of useful and interesting clinical work.

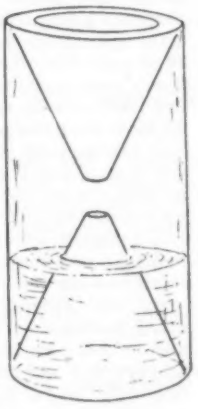
I am, Sir, yours faithfully,

London, W., Feb. 10th. N. HOWARD MUMMERY.

CHLOROFORM IN CHILDBIRTH

To the Editor of THE LANCET

SIR,—At the present moment many attempts are being made to find a safe method for the administration of anæsthetics during labour by the patient herself, for employment in cases attended by midwives. Chloroform capsules have been extensively tried by many hospitals, and, excellent as they appear to be, I venture to suggest that the inhaler here described, which I have had constructed, offers a simpler and safer method for the use of chloroform. By reference to the drawing it will be seen that the inhaler, which can be made of either glass or metal, embodies the same principle as the unspillable inkwell. When it is charged with chloroform, it is impossible for the liquid to be spilled, and yet a free air passage through the instrument and over the surface of the chloroform is permitted. In this way only air and chloroform vapour are breathed. The air does not pass through the chloroform but merely over its surface.



The chloroform can be administered by the patient if she simply holds the inhaler to her nostrils; another method—but probably not suitable for use by midwives—is to insert the inhaler into the narrow end of a rubber funnel, the broad end of which is applied to the face. The broad end should be convoluted to allow sufficient airway, or the funnel itself can be made of wire and merely surrounded by a portion of lint. So long as the patient administers the anæsthetic herself, I believe that there can be no danger, as no great concentration of chloroform can be obtained, and should unconsciousness supervene the administration of the anæsthetic will cease as the patient's hand falls away from the face. If the inhaler is made of metal it will not break if dropped.

Such instruments have the following advantages:—

(1) No sudden concentration of chloroform can be administered.

(2) There is no necessity for the patient to break anything so that, even when semi-conscious, she is still in a position to administer the anæsthetic.

(3) They are cheap to make and can be sold completely sealed.

(4) They are simple to operate. To put the instruments into use it is only necessary for the nurse to puncture both ends of the inhaler with a sharp-pointed instrument, as, for example, scissors; or as an alternative, screw plugs can be inserted in the ends.

(5) When exhausted they can be returned to the chemist who, for a small charge, would replace the exhausted inhaler with a new one fully charged.

(6) The old inhaler can be recharged and resealed by the chemist.

(7) When for use in maternity hospitals or by a doctor there is no need for it to be sealed, as the inhaler can be replenished by simply pouring chloroform in through one end.

(8) It is impossible to overfill, for the chloroform will overflow from one or other end.

(9) It can be easily sterilised by boiling.

(10) The inhaler I have had constructed measures 3 by 1½ in. and the distance between the two open ends is ¾ in.

This inhaler is at present being tried out by me at the City of London Maternity Hospital, and at the Jewish Maternity Hospital.

I am, Sir, yours faithfully,

Harley-street, W., Feb. 8th. R. CHRISTIE BROWN.

BED TENTS FOR ADMINISTERING OXYGEN

To the Editor of THE LANCET

SIR,—In your issue of Feb. 4th (p. 245) Dr. Poulton writes that the first bed tent for administering oxygen was devised by me. This was a wooden chamber, into which the bed could be comfortably run, fitted with windows, and with an oxygen supply and a fan circulating the air. It was built for me at the London Hospital before the war, and was in use when the King and Queen visited the hospital as Prince and Princess of Wales. I then had a chamber made of metal and glass, into which the spring mattress, carrying patient and bedding, could be run. Finally I thought of the bed tent, and this Sir Robert Davis, of Messrs. Siebe Gorman and Co., made for me; the firm's new model is described by Dr. Poulton. I did not add a cooler to this tent because I arranged a fan to blow over the patient's face, and also had the bed put near an open window. In this tent I kept patients for many hours a day, and found that continued oxygen treatment had a beneficial effect on chronic ulcers of the leg. One such ulcer, skin-grafted by Dr. Leonard Colebrook, healed very quickly. The bed tent was shown to the Physiological Society, but clinicians showed no interest in it, although it offered great advantages for treatment of pneumonia and other troubles. The Americans copied the bed tent and added a cooler; several models are now on the market, but not one of the pamphlets describing this invention, so far as I have seen, has given any credit to me. The American bed tents and Dr. Poulton's differ materially only in the adding of a cooling device, which is an improvement.

I hope the bed tent will now come into use.

I am, Sir, yours faithfully,

LEONARD HILL.

The London Clinic and Institute of Physical Medicine Ranelagh-road, S.W., Feb. 10th, 1933.

EARLY DIAGNOSIS OF MALIGNANT DISEASE

To the Editor of THE LANCET

SIR,—In his letter in your last issue Mr. Donaldson says that in most cases carcinoma of the cervix starts on the vaginal surface of the cervix and can be suspected in the early stages. No one can disagree with this, but my own experience is that in women who have had children it is easier to suspect cancer than to say positively that cancer is not present. Large numbers of women who complain of no gynæcological symptoms are found to have lacerations and erosions of the cervix. Who is prepared to say that malignant change is not taking place at the base of a small tear or at the edge of an erosion? The only way for the "specialist" to feel safe is for him to examine all these cases under an anæsthetic and possibly excise pieces for section. How many unnecessary operations this would lead to I shudder to think. Surely our duty is to educate the public to visit their doctors when they notice a change in the behaviour of an organ—as well as when they are ill, uncomfortable, or in pain—rather than to demand that they should come at regular intervals asking to be assured that there is no disease. The good doctor suspects and excludes cancer without his patient ever thinking of the dread word, and there is quite enough cancerphobia about without encouraging more of it. To ask a doctor to exclude cancer in an apparently healthy person is asking the impossible. In certain situations this can be done, but in others even a "specialist" is helpless, and failure in one case would undo all the good resulting from the successful examination of many others.

I am, Sir, yours faithfully,

ARNOLD L. WALKER.

Harley-street, W., Feb. 14th, 1933.

To the Editor of THE LANCET

SIR,—Some misapprehension appears to have arisen over some remarks which I made at the opening meeting of the London Cancer Society, and which inspired the words in your annotation to which Mr. Malcolm Donaldson has objected. My short paper was incorrectly reported (owing to the illness of the secretary) and the draft was not submitted to me before being sent to THE LANCET.

I made no reference to periodic medical examination. Although I agree with Mr. Donaldson as to the ideal of such a procedure, I feel, with you, that it is hardly practicable at the present time. The main purpose of the first part of my paper was to emphasise the frequency with which patients consult their doctors for symptoms which are entirely attributable to cancerphobia. These patients, in my experience, rarely use the word cancer and make no specific reference to their fears; I believe, in fact, that many of them are not conscious of the source of their trouble. The responsibility rests upon the doctor to disabuse their minds of all possibility of malignant disease, and this can only be successfully achieved if the reassurance is accompanied by the use of the word cancer. It is of little use to say to such a patient that nothing abnormal can be found. He (more often she) only suspects that the truth is being concealed. If, however, we say, in so many words, "there is no sign of cancer, tumour, or malignant trouble of any sort," symptoms which have resisted all sorts of treatment will not infrequently clear up forthwith.

I believe that subconscious cancerphobia is almost as frequent as conscious fear of the disease. But the important point is that in neither variety is the patient likely to express the fear explicitly. In the one case he is not aware of it, and in the other he is ashamed to own to it. Much unnecessary suffering could be saved if medical men would more fully appreciate the mentality of these patients. It is the rare case of words being more important than deeds.

I am, Sir, yours faithfully,

MAURICE E. SHAW.

Wimpole-street, W., Feb. 10th, 1933.

ADENOMA OF THE PANCREAS

To the Editor of THE LANCET

SIR,—In your account of the meeting of the Association of Clinical Pathologists (p. 307) a case of adenoma of the pancreas causing hypoglycæmia, presented by my colleague Dr. Murray, is reported as having been in the Archway Hospital. In fact the patient was in St. Mary Islington Hospital; and I rectify the mistake as the case has already been fully recorded by Dr. W. G. Barnard in the *Journal of*

Pathology and Bacteriology, and it may be that someone referring to the literature in the future may be led into error. As this was, I believe, the first case in this country in which the diagnosis was made during life and subsequently confirmed, I would add that the credit for making the diagnosis belongs to Dr. B. Barling, under whose care the patient was.

I am, Sir, yours faithfully,

G. W. GOODHART.

Group Laboratory, Archway Hospital, N.,
Feb. 11th, 1933.

CAVITIES IN PULMONARY TUBERCULOSIS

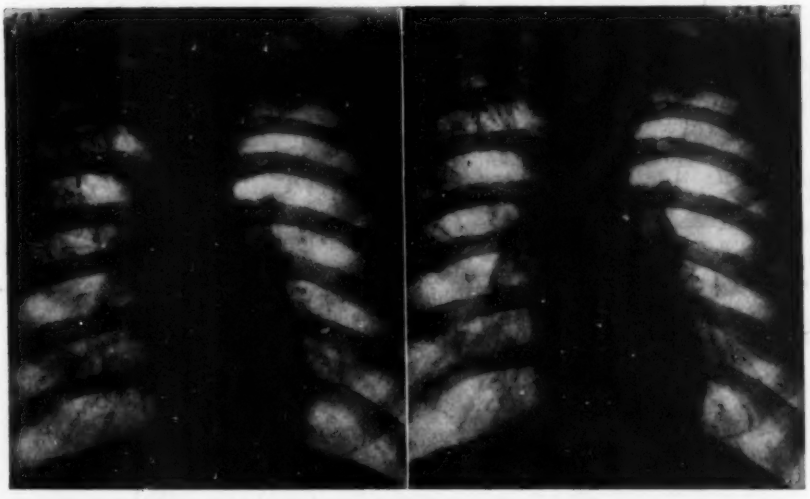
To the Editor of THE LANCET

SIR,—Cavities in tuberculosis of the lungs are most undesirable items in this disease, and if present should be if possible closed by some means or another. The principal dangers of an open cavity are hæmorrhage, continuance of sputum with tubercle bacilli, and reinfection of other parts of the lungs. To my mind the presence of a cavity is one of the chief indications for collapsing the lung, thereby causing the cavity to close, and so inducing it to heal. If collapse of the whole lung should prove impossible or inadvisable, then in many cases the cavity, usually an apical one, may be closed by an extra-pleural plombage. The mechanical means at our disposal for this purpose of obliterating cavities are several. Artificial pneumothorax, a procedure where the scope and chance of success has been greatly enlarged by the recent developments of methods of adhesion cutting. Phrenic avulsion, an intervention which will often induce a cavity, even an apical one, to become smaller and eventually heal. Extra-pleural plombage, which is a local operation and by present methods proving to be very satisfactory. Finally, there is extra-pleural thoracoplasty, a procedure which is rather losing ground owing to the developments of other less severe methods of dealing with the situation.

I would always give, however, a certain time before interfering, unless there are good reasons for immediate intervention, because sometimes these cavities, even quite big ones, heal by themselves without any surgical procedure, and occasionally in a very short time. This is extremely interesting and seems almost impossible. The following case is one instance among a few of which I have had experience :—

Male, aged 26. Admitted to the Victoria British Sanatorium, Davos, on Oct. 13th, 1932. Radiogram (Fig. 1) showed a large oval-shaped cavity in the right lung. Blood sedimentation test 28 mm. in first hour and 58 mm. in second hour. Artificial pneumothorax contemplated and explained to the patient. One month later blood sedimentation test was 18 mm. in first hour and 40 mm. in second hour. On Dec. 13th—i.e., two months later—a further radiogram was made which showed the cavity practically closed (Fig. 2). Blood sedimentation 7 mm. in first hour and 24 mm. in second hour. Thus in two months, with no treatment except rest and calcium by the mouth, this quite large cavity was almost closed.

FIG. 1 FIG. 2



Radiogram showing the cavity in the lung before and after two months' treatment.

I am indebted to Mr. P. G. Sutton, M.S.R., of the X Ray Institute, Davos, for the radiograms.

I am, Sir, yours faithfully,

BERNARD HUDSON, M.D., M.R.C.P.

Victoria British Sanatorium, Davos-Platz,
Switzerland, Feb. 8th, 1933.

PANEL INVESTIGATION BY REFERENCE

To the Editor of THE LANCET

SIR,—Your weekly article in Panel and Contract Practice is usually so good that you will perhaps allow me to draw attention to an inaccuracy in your note this week on Investigation by Reference, where you say (p. 331) :

> "It seems preposterous that a practitioner should be put to the trouble involved in defending his reputation before a medical service subcommittee because he criticises to the clerk of the committee the working of a clause of the regulations with which he was unfamiliar."

I do not think this has ever happened, and so far as London is concerned I am confident that it never will. Any doctor is at liberty to put forward criticisms ; it is only thus that the regulations can be improved ; but for one to be constructive it is advisable that the critic make himself familiar with the regulations, and had this doctor done so he would have learnt that the proper channel for such criticisms is through the panel committee to the Insurance Acts Committee which deals with the Ministry of Health. It is quite useless to describe a clause as "autocratic" when writing to an official who is only doing his duty.

But it was not for the reason stated above that this case was referred to the medical service subcommittee. Your article says (p. 330, column 1) he "concluded his letter to the committee with the following sentence : 'The remuneration received for the treatment of panel patients does not encourage me to give any more than very ordinary treatment.'"

There is here a definite suggestion that this doctor had one scale of treatment for the panel and another for the private patient. It is a tradition of our profession that, whether one is paid or whatever one is paid, we should do our best for the patient under the conditions in which we are working, and as a medical member of the referring subcommittee I should always in such a case vote in favour of a resolution for "investigation by reference." Further, as the representative of the Minister, I should do the same, for the doctor is under contract with him to give the same standard of treatment to his panel patients as he does to those patients for whom he is paid on an ad-hoc basis. I cannot feel that in this case an investigation by reference was "rashly ordered."

We may agree that any investigation as to our conduct is a source of worry however clear our conscience may be. But there is another side to be considered. These investigations are a great safeguard to the doctor concerned. Whenever "any sort of lie about a doctor" is once started it is well to have it nailed to the counter. Some anonymous publicity is not a very big thing to put against the advantage of printed evidence that the complaint had been inquired into and shown to be groundless. There must be many of us who know that misstatements have been circulating for years about some case of our own that we should like to have fully investigated in order to clear our reputation, and such lies are not always started by laymen. In this case "there was no evidence that this doctor had ever treated a panel patient differently from a private patient"; but the "sort of lie about a doctor to the clerk of the committee" was written by himself; and it is difficult to see how he could claim "some monetary compensation for worry and loss of time" even if funds were available and if there were any analogy in our legal procedure for such a payment.

Finally, in justice to our clerk, may I point out that claims for refund are not selectively referred by him to the medical benefit subcommittee as your opening sentences seem to imply; all of them pass to us ipso facto.—I am, Sir, yours faithfully,

T. B. LAYTON.

London Insurance Committee, Wilmington-square, W.C., Feb. 14th, 1933.

THE PATHOLOGY OF APPENDICITIS

To the Editor of THE LANCET

SIR,—In the leading article in your last issue, in which you reviewed the work and views of Prof. Aschoff, you were good enough to allude to the investigations by Dr. A. Paine and myself of some 20 years ago. I should like to add that in addition to the experimental work we investigated the pathology of early human appendicitis in specimens taken direct from the operating theatre and found that in them the early changes commenced in the submucosa and not on the surface of the mucous membrane, and as in the blood infection of rabbits the lymphoid tissue first became necrotic. We were working at this subject entirely from the aspect of rheumatism, but ten years before, Adrian had shown that appendicitis could occur in animals from blood infection and had also studied the same in man. By 1913 the German investigators had done much upon this problem.

There is no shadow of doubt in my mind that appendicitis can arise in this way, probably, as we experimentally demonstrated, and others had commented upon, from a source such as acute tonsillitis. I do not pretend to assert that appendicitis is always caused by infection from the blood stream, but to assert the opposite would be equally, even if not more, rash. On the face of it appendicitis following quickly upon an acute tonsillitis is more probably the result of a blood infection than a mysterious change of virulence in the microbic contents of the lumen of a previously healthy appendix, for the evidence in favour of this is good, reasonable, and scientific.

When an appendix has been damaged and an ulcer having formed has healed by scar formation with contraction, inspissated material beyond the stricture may, as we know, form a stercolith. Doubtless then the dangerous attack may now be dependent upon a local as well as a general factor. He is a bold pathologist who would deny the occurrence of appendicitis by a blood-borne infection.

I am, Sir, yours faithfully,

Harley-street, W., Feb. 13th, 1933. JOHN POYNTON.

"DIAGNOSTIC EXPLORAL SUCTION" OF THE NASAL SINUSES

To the Editor of THE LANCET

SIR,—The July, 1932, number of the *Journal of Mental Science* contained statistics of the findings in 880 cases of mental disorder whose nasal sinuses were investigated by the exploratory technique evolved by Dr. Patrick Watson-Williams. In these cases of psychosis from sinus disease it not infrequently happens that the indications in the nose of the presence of sinusitis are not typical or may even be absent; the psychotic state, thus resembling other toxæmic states arising from foci of sepsis, increases as the evidence of external focal discharge diminishes. Hence the importance of this special technique in the search for sources of toxæmia in psychotic patients cannot be over-estimated, especially in cases where there is an early history of symptoms referable to the upper respiratory tract, and in those cases where psychosis appears immediately after an attack—not infrequently mild—of what is regarded as influenza.

In his letter to you of Feb. 4th (p. 276) Dr. Watson-Williams submits for general adoption a more precise nomenclature for this technique in order that records of investigations in sinus disease can be put upon a uniform basis. That records should adequately indicate the exact mode of investigation has been recognised in such research in cases of mental disorder. The Board of Control in Part I. of its Eighteenth Annual Report for the year 1931 (pp. 108–109) indicates the importance of this matter thus:

> "To those who report that search for evidence of sinusitis or other foci of chronic infection has failed to reveal it as a relatively common condition, we venture to make the request that they will make quite sure that they are using the precise technique employed by those who report positive results and, if they do not use this technique, to make that fact clear."

Of the terms which Dr. Watson-Williams suggests, that of "suction-exploration" appears to me the most useful. I am, Sir, yours faithfully,

Birmingham, Feb. 13th, 1933. T. C. GRAVES.

THE INDUSTRIAL DOCTOR.—The parenthetic clause in line 10 of the second paragraph of Dr. Castellain's letter last week, should have read "save for medical and surgical first-aid."

PANEL AND CONTRACT PRACTICE

Sickness Claims

THE sickness experience of the Hearts of Oak Benefit Society, as reported in the daily press, brings to light some interesting facts. During the last eight years, that is during the period of the most acute depression from unemployment, there has been a continuous yearly rise of sickness claims. When work was abundant claims were light, but in industrial (especially mining) areas there is now an immense increase in sickness. Apparently the actuarial calculation for the sickness of young people is not in accordance with the society's experience. Young people are claiming much more than they did; they have no jobs and nothing to do except to think about themselves, and there is a consequent increase in claims for mental and nervous depression. In the first week of January there was an increase of 100 per cent. in new claims, in the second week of 110 per cent., in the third of 130 per cent., and in the fourth of 200 per cent. It is suggested that these claims, approximately 10,000 a week, were almost entirely a result of influenza, and this made more serious by a low standard of physique and an exaggeration of under-nourishment, both backed up by mental depression. Even in happy times influenza is apt to leave depression behind, and an increase of nervous and mental breakdown is to be expected, brought on partly by influenza and partly by the absence of happiness and of employment, especially among young people who have failed to obtain employment since they left school. While certifiable insanity may show little variation, it is worthy of note that the number of out-patients attending the Maudsley Hospital jumped from 1608 in 1930 to 1993 in 1931. Figures for 1932 are not yet available. The effect of the prevalence of the influenza epidemic is evident from the number of prescriptions received by the pricing bureaux of insurance committees.

Effect of Removal from the Panel

The Minister of Health can only remove a doctor's name from the panel after an inquiry which has satisfied him that the continuance of the practitioner on the panel would be prejudicial to the efficiency of the service. His action is administrative after an inquiry committee has reported its findings, and from his decision there is no appeal to the courts. This procedure is apt to be confused in the lay mind with that of the General Medical Council which has power to erase a doctor's name from the Register if it is proved to the satisfaction of the Council that he has been guilty of infamous conduct in a professional sense. This is a far greater penalty than removal from the panel, for it prevents a doctor from acting as a medical practitioner at all. It does not, of course, take away his medical knowledge—he could diagnose and treat a case just as well before as after the decision—but he cannot give a medical certificate which would have any value legally, he cannot give a death certificate, and he cannot sue for his fees. If an insurance committee or a local medical committee or a panel committee reports to the Minister that the continuance of a practitioner on the panel would, in their opinion, be prejudicial to the service, he must (but if the report comes from other sources, he may) set up an inquiry committee consisting of a lawyer and two doctors who may go into anything in connexion with this doctor's practice. Due notice is given to the doctor of all points of inquiry, evidence is given on oath, barristers or solicitors are employed, and the rules of evidence are strictly adhered to. The committee reports to the Minister who decides on that report the penalty to be imposed—after consultation with the advisory committee. It may be a fine, in which case the doctor has the right to be heard on the question of its amount. It may be suspension of decision for a period, to give the doctor time to furnish evidence of subsequent good conduct. It may be permission to retire from the panel, on the written undertaking that he will not rejoin elsewhere without the Minister's consent. Or it may be immediate removal from the panel list. This decision does not prevent the doctor from carrying on with private work in practice, but the regulations definitively prevent him acting either as an assistant or as a deputy (including locum tenency) to another doctor's practice. It might be thought that, as the principal is responsible for the acts of his assistant or deputy, he could employ whomsoever he wished to do the work he could not do himself, but the regulation is quite clear on this matter. A doctor removed from the panel cannot act as locum tenens, assistant, or deputy to another panel doctor. He could, of course, have a partner who is on the panel, but he would not himself be able to treat any panel patients for or on behalf of that partner.

Inspection of Surgeries

Gloucester insurance committee has decided to revert to the practice of inspecting the surgeries and waiting-room accommodation of its insurance practitioners. There had, it seems, been a few complaints. The regulation is brief but important:

> A practitioner is required to provide proper and sufficient surgery and waiting-room accommodation, having regard to the circumstances of his practice.

No standard is laid down, but obviously such things as heating and seating must be taken into consideration, for it is not to the advantage of the service nor of the practitioner for insured persons to be overcrowded when attending for treatment nor that they should be expected to sit in badly ventilated and insufficiently heated rooms. On the other hand, it is not suggested they should have the use of the doctor's best room when they come in, as they often do, wearing their working clothes and muddy boots. Some time ago a discussion took place whether a couch should be provided in the consulting room. Was a couch accommodation or was it apparatus? The insurance committee has no authority over apparatus, but it has over accommodation; hence the matter was important. The doctor in this case said he never used a couch in his consulting room; any examination in the recumbent position was done at home in the patient's bedroom, which, he said, was more suitable for the purpose, especially in the case of women patients. In view, however, of emergency treatment that may at any time be required it can hardly nowadays be contended that a couch is not a necessity in the consulting room.

TINFOIL FOR HOSPITALS.—The tinfoil fund of the Ancient Order of Druids last year received over 100 tons of tinfoil, lead capsules, tooth-paste tubes, and other waste metals averaging £20 per ton in value which were sold for the benefit of hospitals. Since the fund was started in 1912 more than £20,000 has thus been realised.

OBITUARY

ALFRED EICHHOLZ, C.B.E., M.D. Camb.

LATE CHIEF MEDICAL INSPECTOR, BOARD OF EDUCATION

Dr. Eichholz, whose death on Feb. 6th was announced in our last issue, was born at Manchester in 1869. His father was a cotton merchant who came over to this country from Hildesheim; his mother was Babet Praeger of Amsterdam. Eichholz went to Manchester Grammar School and from there to Emmanuel College, Cambridge, where in 1891 he took a first class with distinction in the Natural Science Tripos, and became a Fellow of his College two years later, lecturing from 1895–98 on natural science and demonstrating physiology in which he did some original work. He completed his clinical studies at St. Bartholomew's Hospital, qualifying M.D. Camb. in 1895 and M.D. three years later. Directly upon this he was appointed inspector of schools for West Lambeth, and the remainder of his life was devoted to the welfare of school-children. For he became in 1908 a medical officer of the Board of Education and in 1919 chief medical inspector to the Board; his retirement in 1930 was retirement only in name, for he then undertook for the Board and the Ministry of Health the inquiry into the social conditions of the deaf of which the report appeared shortly before his death. Dr. Eichholz early recognised the defects in the health of school-children which impaired their working capacity late on. He learnt the home conditions under which many of them lived and his position at the Board of Education told him what resources were available or might be made available to remedy the defects which he found. From this knowledge he was able to frame policies which would provide remedies or remove obstacles to their employment.

DR. EICHHOLZ

Photograph by Elliott and Fry

Medical inspection and treatment gave Eichholz unrivalled opportunities of coöperation with medical officers and administrators. During his 22 years of activity at the Board of Education he was frequently called on to give evidence before Government committees. He was a witness on the Employment of Children in 1902, on Physical Deterioration in 1903, and on the Feeble-minded in 1908. His interest in social conditions, joined with his medical knowledge made his survey of the conditions of munition workers fruitful of results, a service for which in 1919 he was made C.B.E. Eichholz possessed qualities which marked him out for a good inspector. It was not easy to shield from him weak spots in the armour, but he was always constructive and helpful in criticism. He had a deep philosophic, scientific, and educational background, but his knowledge and thought were always in relation to something yet deeper. They had for their setting human needs and strivings, and not merely these in general but as they came before him in the individual, especially the individual handicapped child. It is impossible to over-estimate what, in particular, the blind and deaf and dumb child, adolescent and adult, owed to him. He made himself acquainted with the special problems and difficulties, and his knowledge of every school for the blind and the deaf in the country was intimate, for they had grown up under his guidance. In matters of administration, education, and industrial training, his colleagues at the Board could rely upon him in full assurance for help and advice; he could always either point out a way for meeting the needs of a particular school or teacher or child, or would set to work to open out a way. He never rested until the best had been done that could be done.

And then his way of doing things was always gracious and courteous. That is the unfailing testimony of his colleagues, of teachers, of parents, and children. His graciousness and courteousness were no mere accident, a pleasant added trait among other traits; they sprang from a life whose roots went deep. He was sustained by and lived out the Jewish faith and Jewish ideals. All who knew him in everyday life felt how entirely fitting was the tribute paid by his close friend, the Rev. E. Levine, when he reminded those who stood round the coffin at the cemetery synagogue, that, like Moses of old when he cast the tree into the bitter waters of Marah and they became sweet, so did Eichholz in private life, on committees, in the office, or in the school, make bitter waters sweet. The memory of his long service for his country will live in many directions and in many quarters, but the uppermost remembrance in the minds of his friends and colleagues will be the spirit of kindness, self-effacement, and helpfulness which animated all he was and all he did.

Dr. Eichholz married, in 1895, Ruth, younger daughter of the late Very Rev. Hermann Adler, the Chief Rabbi, and had three sons.

THE LATE LIEUT.-COLONEL J. STEPHENSON

In a biographical sketch last week of Colonel Stephenson, brief mention was made of his work as a zoologist. Mr. W. T. Calman, D.Sc., F.R.S., keeper of zoology at the British Museum (Natural History), writes: "Stephenson was eminent both as a teacher of zoology and as an investigator. During his 14 years at Lahore he succeeded in inspiring his Indian students with something of his own enthusiasm for the subject, and several of them have since gained distinction by their researches in very diverse branches of Indian zoology. Later, in Edinburgh, he was a prominent member of the very active school of zoology directed by Prof. Ashworth, and took an important share both in teaching and in research. Since removing to London three years ago he had been a valued member of the unofficial staff at the Natural History Museum, and as zoological secretary of the Linnean Society, and editor of the *Fauna of British India*, he exerted a widening influence among the younger generation of zoologists.

"His own researches were mainly concerned with the oligochætes, the group comprising the earthworms and their immediate allies. On these he published a long series of memoirs leading up to a

comprehensive monograph, 'The Oligochæta,' published by the Clarendon Press in 1930, and at once recognised as a standard work. In it he discussed, with much originality and breadth of view, the questions raised by the morphology, phylogeny, and geographical distribution of these animals. Among his too rare excursions into more general subjects may be noted a remarkable address on the History of the Cell Theory, delivered before the Linnean Society in November, 1931, in which he demolished the statement current in text-books 'that the cell theory was formulated by Schleiden and Schwann in 1839.'

"Much of Stephenson's wide knowledge and sound judgment," Dr. Calman adds, "was devoted to clarifying the work of younger zoologists whose researches he directed and whose papers he edited, and all of these will retain a memory of a wise counsellor and a singularly attractive personality."

ALFRED PARKIN, M.D. Durh., F.R.C.P. Lond., F.R.C.S. Eng.

PHYSICIAN TO THE ROYAL VICTORIA INFIRMARY, NEWCASTLE-ON-TYNE

WE regret to announce the death of Dr. Alfred Parkin, one of the leading physicians of the north of England, which occurred suddenly at his residence in Newcastle on Wednesday, Feb. 8th, in the 54th year of his age.

Alfred Parkin was the youngest son of the late Mr. George Parkin, of Gateshead. He was born in Wrekenton in 1879, and received his general education at the Royal Grammar School, Newcastle. He proceeded to the study of medicine at the Durham University College of Medicine, graduating in 1901 with first class honours, after a brillant scholastic career, during which he won the Tulloch scholarship in 1898 and the Charlton and Gibb scholarships in 1901. After studying in Berlin and Vienna he took the English conjoint qualifications in 1902, the F.R.C.S. Eng., and M.D. Durh. in 1904, and the M.R.C.P. Lond. in 1908; he was elected F.R.C.P. Lond. last year. He held the house appointments at the Newcastle Infirmary, being house surgeon to Prof. Rutherford Morrison, and house physician to Sir Thomas Oliver. During the time of his house physicianship the King Edward VII. bridge over the Tyne was in course of construction, and several cases of caisson disease were admitted to the wards. Stimulated by his chief, Sir Thomas Oliver, to whom he was much attached, he made a study of the clinical features and carried out some experimental work. This became the subject for his M.D. thesis, which was published in the *Northumberland and Durham Journal* for 1905, and subsequently in book form, and was a model of exact observation and recording.

DR. ALFRED PARKIN

Photograph by James Bacon.

When his resident appointments at the infirmary terminated he acted as assistant for a short time to the late Dr. Mearns, of Gateshead, and then entered on a fruitful period as resident medical officer to the Newcastle Dispensary, then situated in Nelson-street. He always looked upon this period as supplying him with very valuable experience, and it was while visiting in the homes of the poor that he laid the foundation of that understanding of the sick which was so marked a characteristic with him. About this time he was inclined to a surgical career and for a short period acted as one of the surgical registrars at the Royal Infirmary. His interest in surgical pathology was very keen and he was an excellent demonstrator in that subject, but the technique of surgery did not much attract him, and the investigation of cases and problems of diagnosis appealed more to his philosophic turn of mind, so that he soon turned towards medicine as a career. And no man ever made a happier choice. His election as assistant physician to his old hospital in 1908 settled all questions of a vocation, and from henceforth he gradually became one of the best known and sought after consulting physicians in the north. In 1913 he was elected to the full staff of the infirmary, and at the time of his death he held the posts of honorary physician to that institution, consulting physician to the Gateshead Union Hospital, and lecturer in therapeutics to the Durham University College of Medicine, where he had previously served as assistant demonstrator in anatomy, physiology, and pathology. During the war, with the temporary commission of Major R.A.M.C., he was one of the officers in charge of the First Northern General Hospital, located at the Armstrong College.

As a physician Alfred Parkin was a notable success. For him the problem of the moment was everything and he had a remarkable power for concentration. In consequence the patients entrusted to his care all felt that confidence which is engendered by undivided attention. He took note of everything in the circumstances of the sufferer and investigated the details and history of illness with punctilious care. His quiet impressive manner was a great asset; he was quite unconscious of this, but all who worked with him appreciated the fact. And much above his knowledge and skill, was his understanding of the sick and of all that illness means in a household. He was often the "doctor's doctor," than which no higher compliment can be paid. As a man of affairs he was more reticient than shy, but he never shirked his duty and his opinion on business questions was always highly valued by his colleagues.

Parkin was a great teacher and especially at the bedside. In ordinary hospital practice he found so much of importance that he was a little impatient of the search for the unusual, and it became his life's occupation to drive home to his students, who were devoted to him, the lessons of their everyday work. As a lecturer he was not so happy—rhetoric did not appeal to him, and he liked an association more intimate than the lecture theatre provided. It was probably for the same sort of reason that he never wrote much and that he did not greatly value the opportunities given by medical societies to express his views in any casual or desultory manner. It was characteristic of him to want to get to the bottom of everything, at whatever cost of time or trouble. This attribute explained his interest in medical history and expressed his desire to get at the beginnings

of things. His little brochure on Ambrose Paré is an example of this, and he had previously shown this quality in his M.D. thesis.

"I like to think of Parkin," writes a friend and colleague, "in wrapt attention when his interest was aroused; he always seemed to hold a watching brief for common sense and logic, and his judicial mind usually led him to a conclusion with which most of us had to agree. In debate he was often satirical, but never without justification, and he never seemed to speak until goaded to be outspoken. A great capacity for friendliness was one of his most outstanding characteristics, and he was loyal and staunch through all vicissitudes. None loyal to his memory would wish it to be known how many times he befriended those in trouble, but there are many sad hearts at his passing, and many among his poorest dispensary and hospital patients. Parkin was very fond of children and his affection for them was reciprocated. He took no part in sport, but was very fond of motoring, and he loved the country and country affairs. It was a delight to accompany him to a country consultation; there was never a dull moment on such a journey, for he knew the north country well and he found great interest in all around him."

Dr. Parkin's death was an unexpected blow to a large circle of friends and patients. There is no doubt that he had always given of himself too freely, and that he was often a tired man, for while very chary of undertaking certain work he always concentrated closely on the job in hand, a fact which accounted for his infrequent appearance in public affairs and at learned societies. He seemed to be in good health on the day of his death; he took his ward class as usual in the morning, and one who attended it describes it as exceptionally large and the lecturer extremely happy in his teachings. In the afternoon he made a long car journey to attend a country consultation. He was taken ill on the way home, and died the same night from coronary thrombosis. He leaves no family, but is survived by a widow and by his mother, an old lady of 97, who was his constant care. He and his wife were devoted to one another, and great sympathy is felt for her. Dr. Alfred Parkin was the uncle of the late Dr. G. C. Parkin, who died in December last during a typhoid epidemic while working among his patients at Malton.

WILLIAM HENRY HARSANT, F.R.C.S. Eng., who died on Feb. 10th at Bristol in his eighty-third year, was born at Epsom and educated at the City of London School. Entering Guy's Hospital he qualified L.S.A. in 1873, and in the following year was gold medallist in surgery and house-surgeon at the hospital. He then went to Bristol as house-surgeon to the General Hospital, became lecturer on anatomy at the medical school, and secured the position of surgeon to the Royal Infirmary, his special interest being in the surgery of the thyroid and middle ear. An accidental infection led to the loss of his right index finger and the decision to abandon surgery for general practice in Clifton, where for many years he was one of the most popular and respected of family advisers. Mr. Harsant was a life-long member of the Bristol Medico-Chirurgical Society, filling all the offices up to the presidency and being for a time joint editor of its journal. His wife predeceased him and he is survived by one of their two daughters.

PARLIAMENTARY INTELLIGENCE

NOTES ON CURRENT TOPICS

New Bills Introduced

IN the House of Lords on Wednesday, Feb. 8th, the following Bills were presented and read a first time: Cancer Hospital (Free) Bill; Samaritan Free Hospital for Women Bill; and the Essex County Council Bill.

The Essex County Council Bill contains provisions for the licensing and control of establishments for massage and special treatment. Clause 54 provides that the provisions of this part of the Bill shall not apply to establishments for massage or special treatment carried on by a duly registered medical practitioner with respect to which there has been lodged with the Council a certificate, in a form to be approved by the Council, and signed by two duly registered medical practitioners practising or residing in the county, not being in partnership with such first-mentioned medical practitioner, or with each other, and not having any financial or other interest in such establishment, to the effect that the medical practitioner carrying on, or proposing to carry on, such establishment is a suitable person to carry on the same at premises used, or to be used, therefor. It is further provided that any such certificate shall not be valid (*a*) with respect to any person or premises other than the person or premises specified therein, or (*b*) for a period extending beyond Jan. 31st next following the date of the certificate.

The Bill also contains miscellaneous provisions with regard to the control of refuse dumps, the pollution of rivers and streams, town planning, and the registration and inspection of premises used for the manufacture of ice-cream.

Housing and Slum Clearance

ENGLAND AND WALES

The House of Commons on Tuesday, Feb. 7th, considered in Committee the financial resolution in connexion with the Housing (Financial Provisions) Bill. Sir D. HERBERT, Chairman of Committees, was in the chair.

Sir E. HILTON YOUNG (Minister of Health) in moving the resolution said it was the necessary preliminary to the Government's scheme for the enlistment of the building societies in an effort to provide housing for the working classes. The outline of the scheme was that a certain guarantee should be extended to the building societies in respect of advances made by them in excess of their normal advances for building. The liability would be distributed in this way: one-third of the excess would be guaranteed by the local authorities, one-third by the Exchequer, and one-third would remain with the building societies. In practice it would amount to this: the normal amount advanced by building societies was 70 per cent. of the value of a building; that would be raised under this scheme to 90 per cent., and the difference of 20 per cent. would be guaranteed in the manner he had described. It was not contended that they would be able by this scheme to build the very cheapest sort of house to let at the lowest rents to the least well-paid classes of wage-earners. But it was contended that already it was possible to provide small houses at such rents as would meet a large part of the demand for houses for the wage earners down to the class just above the very lowest and cheapest of all. In securing that they would have secured a great addition to the supply of houses from private enterprise. That was a big step in advance.

It would be unwise for the Government to embark

on this new epoch in housing—the epoch of no general subsidies—without making what provision they could to insure against a failure of the housing supply during the transition period. The Bill allowed some scope for himself, as the Minister of Health, to approve applications for subsidised houses which had already been put forward. In committee it would be his object to find a reasonable provision which would allow bona fide schemes which were advanced to a considerable degree to go through under the old subsidy regime. As to the maintenance of standards of building, the state of affairs when this Bill passed into law would be this: the local authorities would have full power, both under by-laws and under the Town Planning Act, to impose their own standards of housing in their localities. The Ministry of Health would also retain control by its authority to approve the guarantee for the building societies' proposals. But further than that, it was his intention to accept certain amendments, which were to be proposed at a later stage by Sir P. Harris, relating to the size and density of houses, which would have the effect of maintaining the present standards in that respect.

It was his intention to set up a committee charged with the task of reviewing the housing and slum clearance problem. He would propose to include in the inquiry of this committee any possible addition in the way of powers of re-conditioning, particularly power for the compulsory purchase of houses by local authorities, in order that they might be re-conditioned—a power which was the only important power which they did not possess under existing legislation. The inquiry should include the price at which such houses should be purchased. There ought also to be some investigation into alternative powers in default of the local authorities. Slum clearance was an urgent necessity, and if they could not get it done by one power it must be done by another. They would never deal with the slums efficiently until they concentrated the subsidy on the slums. With the knowledge and agreement of the Chancellor of the Exchequer he said that he would not exclude from the consideration of the committee that there should be some extension of financial assistance from the Exchequer to the method of dealing with slums by re-conditioning, as well as by clearance. It need not, however, go abroad among the local authorities that because the Government were considering any possible means of increasing the efficiency of their legislation that was any reason why the authorities should delay in putting into force the powers to deal with slums which they had at the present time.

The resolution was agreed to.

SCOTLAND

In the House of Commons on Thursday, Feb. 9th, Mr. SKELTON (Under Secretary of State for Scotland), in moving the second reading of the Housing (Financial Provisions) (Scotland) Bill, said that the Slum Clearance Act, 1930, would remain unaltered. The State subsidy of £2 10*s*. per person removed from a slum and the local subsidy of £4 10*s*., or whatever more might be necessary to re-house the persons so removed, would also remain. But the general subsidy of £9 in towns and £12 10*s*. in rural districts, under the Wheatley Act of 1924, would come to an end. In place of the general subsidy there would be a subsidy of £3 both for town and country districts which was to be used for the specific purpose of the housing of the low-wage earners, who were at present living in overcrowded conditions. The Rural Housing Acts of 1926 and 1931, whereby rural houses were re-conditioned, would remain unaffected. The 1923 Act was swept away. The subsidy to private enterprise for letting purposes was brought to an end. Under the new scheme the State and the local authorities would combine to give a guarantee for building society loans, between the proportions of 70 and 90 per cent., to be used for the purpose of encouraging and financing private enterprise in building. The main problem to-day was not that of dealing with a rapidly-increasing population; it was a problem of the slums and the overcrowded areas. The problem of slum clearance was really one for public enterprise, and they might leave to private enterprise the work of building the houses required. The work of slum clearance went on unchecked. Between 1923 and Dec. 31st, 1932, 20,000 slum houses had been closed and over 19,000 houses had been built to replace them. At Jan. 1st, 1933, there were 7752 houses actually under construction and 2469 approved, but not yet begun. That was a very remarkable result in a time of financial difficulty. The £3 subsidy house was to be confined to low-wage earners who were overcrowded, but not living in slum conditions.

The Bill was read a second time.

Hospitals and Road Accidents

The London Passenger Transport Bill was considered on Report in the House of Commons on Monday, Feb. 13th.

Lieut.-Colonel HEADLAM, Parliamentary Secretary to the Ministry of Transport, moved to delete Clause 53. He said this amendment carried out a pledge which was given by the Government during the committee stage of the Bill. Sections 35 and 36 of the Road Traffic Act, 1930, imposed obligations to provide against liability in respect of third party risks, either by a policy of insurance or by underwriting, involving the giving of security as defined by Section 37 of the Road Traffic Act, and depositing the sum of £15,000 with the Accountant-General of the Supreme Court. The removal of Clause 53 from the Bill really put the Board in the same position as any other persons who owned motor vehicles. Under Section 36 of the Road Traffic Act, insurers were subject to a further liability to pay to a hospital which had given treatment to any person injured by their vehicles reasonable expenses up to the sum of £25. He hoped that the elimination of the clause would give satisfaction to hon. Members.

The amendment was agreed to.

Food Adulteration

ON Feb. 14th, in the House of Commons, Mr. R. J. RUSSELL asked leave to introduce a Bill to amend the Food and Drugs (Adulteration) Act, 1928, and to control the sale of cheese other than whole-milk cheese. He said the Bill proposed that the butter-fat in cheese should be standardised at from 40 to 55 per cent., a percentage which had been reduced by manufacturers to about 16 or 20 per cent. The Bill would secure that all cheese not made of whole-milk would be marked as "skimmed-milk" cheese.

Leave was granted to introduce the Bill, which was brought in and read a first time.

HOUSE OF COMMONS

THURSDAY, FEB. 9TH

Foreign Skimmed Milk

Mr. DREWE asked the Minister of Agriculture whether, in view of the position of the milk industry and the present glut of milk, he would be prepared to prohibit or restrict the entry of foreign machine-skimmed milk as an emergency measure pending the reorganisation of the milk industry.—Sir GEORGE BOWYER replied: My right hon. friend has no powers to take the action suggested. He would draw the attention of my hon. friend to the views of the Reorganisation Commission for Milk on the subject of imports of skimmed condensed milk as set out on pages 138 and 139 of the Commission's Report.

Pasteurisation of Milk

Captain PETER MACDONALD asked the Minister of Health whether his department had now reached any decision as to the value of and need for compulsory pasteurisation of milk and, if so, what his decision was.—Sir E. HILTON YOUNG replied: This is now under the consideration of a committee of the Economic Advisory Council, which is examining the question of disease among milch cattle. Pending their report I am not in a position to make any pronouncement on the subject.

Poor-law Children

Mr. LOVAT-FRASER asked the Minister of Health if he was aware that in April. 1931, there were over 100 children in the workhouses of Dorsetshire contrary to the regulations, and that there were still over 100 children there; and if he proposed to take any steps in the matter.—Sir E. HILTON YOUNG replied: The numbers stated are not in accordance with the information I possess. The return relating to Jan. 1st last is not yet available, but on Jan. 1st, 1931, the number was 68, and on Jan. 1st, 1932, was 44. Since then I have sanctioned the erection of two additional cottage homes to accommodate 30 children.

Radium Conference Report

Mr. LECKIE asked the Minister of Health what action he proposed to take to carry out the recommendation of the Radium Conference, whose report was published in January.—Sir E. HILTON YOUNG replied: The conference on massive radiation to which the hon. Member refers was not summoned by me, but by the president of the Royal College of Physicians and the president of the Royal College of Surgeons. It may, I think, safely be anticipated that the report of the conference will receive the attention of the Radium Commission and other bodies directly concerned with the therapeutic application of radium.

Public Health Law Consolidation

Mr. LIDDALL asked the Minister of Health when the Committee on Local Government and Public Health Law Consolidation, appointed Dec. 8th, 1930, would issue the promised interim report covering the consolidation of the law of local government.—Sir E. HILTON YOUNG replied: I understand that the committee hope to complete their interim report dealing with the law of local government not later than the end of the present month.

Female Vagrancy

Sir GIFFORD FOX asked the Minister of Health whether his returns from the provinces showed any increase in or any appreciable numbers of women or girl tramps.—Sir E. HILTON YOUNG replied: Such information as is available does not suggest that there has been any considerable increase in the number of women and girl casuals. They do not ordinarily account for more than 5 per cent. of the total number of tramps.

MONDAY, FEB. 13TH

All-India Medical Council Bill

Mr. JOHN asked the Secretary of State for India whether he had considered the resolution passed at the All-India Medical Council, held at Lucknow, and sent to him, requesting the Government not to proceed with the All-India Medical Council Bill until such time as the Federal legislature was duly constituted; and what action he proposed to take in the matter.—Sir S. HOARE replied: The resolution referred to by the hon. Member has not reached me.

TUESDAY, FEB. 14TH

Mental Condition of Accused Persons

Mr. MCGOVERN asked the Secretary of State for Scotland what were the reasons for dropping the prosecution of Colonel Frederick Watkins, Blair Atholl, Lenzie, who was arrested and charged with shoplifting from Messrs. Marks and Spencers' stores on Dec. 22nd, 1932.—Mr. NORMAND (Solicitor General for Scotland) replied: This officer was charged with shoplifting from the stores of Messrs. F. W. Woolworth, Ltd., Glasgow. The Lord Advocate ordered no further proceedings, in view of the accused's previous medical history, and a medical specialist's report as to his mental condition. The accused is now under treatment in a home.

Mr. MCGOVERN: Is it not a fact that the Lord Advocate instructed the Edinburgh agents of this man to secure such a certificate, and that on the production of such certificate he would order that no further steps should be taken in this case; and is this man now a paymaster in the Regular Army in the Scottish Command in Edinburgh?

Mr. NORMAND: With regard to the first part of the question, I think the position is that the only connexion that the Lord Advocate had with the doctor who gave the certificate was that the doctor was the usual doctor employed by the Crown in cases where the mental condition of an accused person is in question. I am unable to answer the second part of the question.

Mr. MCGOVERN asked if medical evidence for and against as to the mental condition of this man should have been produced in court to decide whether he was mentally unstable or not.

Mr. NORMAN said that the course taken in this case was perfectly normal. In minor cases of this kind it was within the discretion of the prosecutor to have an investigation made for himself and take what action seemed proper to him.

Mr. MCGOVERN asked the Secretary for Scotland the reasons for the failure to proceed with the prosecution of Mrs. Mary McBeth or Semple, of Newlands, Glasgow, who was charged with shoplifting from Messrs. Marks and Spencers, Ltd., on Dec. 8th, 1932; whether he was aware that she had been charged on two previous occasions, on Jan. 19th, 1914, from Messrs. Simpson and Sons' Stores, Jamaica-street, Glasgow, and in November, 1924; and what the sentence was on each occasion.—Mr. NORMAN replied: It is not the fact that the prosecution against the woman referred to did not proceed to trial. The case was in fact tried on Feb. 1st, 1933, before the Stipendiary Magistrate, Glasgow, who, in view of medical evidence upon the accused's mental condition, found her not guilty. She had previously been charged with similar offences. In February, 1914, she was put on probation for six months, and in November, 1924, she was ordered to find caution for her good behaviour, which was done.

Mr. MCGOVERN asked whether medical certificates were produced on behalf of this woman and the Stipendiary Magistrate found himself in a great difficulty in not accepting what had previously been accepted by the Lord Advocate; was this woman charged in 1914 with stealing an article valued at £43; did she plead that there was anything wrong with her mind, and did the police doctor certify her as being absolutely sane?

Mr. NORMAND: The Stipendiary Magistrate heard evidence and did not act upon any certificate. I am not able to answer the question as to the value of the article which she was accused of stealing in 1914. I do not think that on either of the previous occasions she pleaded insanity or mental weakness in connexion with the charges.

Mr. MAXTON: May we advise our constituents that under the present judicial regime in Scotland a medical certificate will always be taken as an excuse for theft?

Mr. NORMAND: No, Sir.

Mr. MCGOVERN gave notice that he would raise the matter again when the Lord Advocate returned, because, he said, there was a feeling in Scotland that the law was being "rigged" in this case.

Medical and Dental Services Report

Mr. LIDDALL asked the Secretary to the Treasury when the Committee on Medical and Dental Branches of the Defence Services, appointed May 19th, 1931, would present its report.—Mr. HOARE-BELISHA replied: I am informed by the chairman that this inquiry has now reached the stage at which the Committee may shortly consider a report.

GUERNSEY MENTAL HOSPITALS.—Dr. T. Saxty Good medical superintendent of Oxford County and City Mental Hospital, has reported upon the condition of the mental hospitals in the island of Guernsey. He describes the female institution, an annexe of the St. Peter Port Hospital, as gloomy and prison-like in appearance—it was, in fact, formerly an old house of correction. The room used as an infirmary is dark, dismal, and quite unsuitable, and the single rooms are "dark, cold, badly ventilated and lighted." There is no form of central heating, "the general effect is extremely depressing," and structurally the building is inadequate and unsuitable. None of the nurses are fully trained in mental nursing; there is too much solitary confinement; the patients are unoccupied and unclassified, and there are no amusements. In the male hospital, an annexe of the country hospital, the single rooms are lighted by small skylights, and the floors are of concrete. "The whole building has a prison-like appearance, and is quite unsuitable for treating mental illness." In the mental and general hospitals, the workhouses, and schools Dr. Good found a serious proportion of mental defectives. There is no out-patient department at any hospital in the island. Dr. Good recommends the appointment of a medical man experienced in the treatment of mental disorder to organise the main and auxiliary services for dealing with such disorders. He thinks that money spent upon improving the existing buildings would be largely wasted, and suggests a new building in the grounds of the country hospital, and the collection there of the whole of the hospital services, leaving only a small unit in St. Peter Port to deal with accidents. The asylums committee has recommended the States to appoint "for at least one year" a medical officer as proposed by Dr. Good.

PUBLIC HEALTH SERVICES

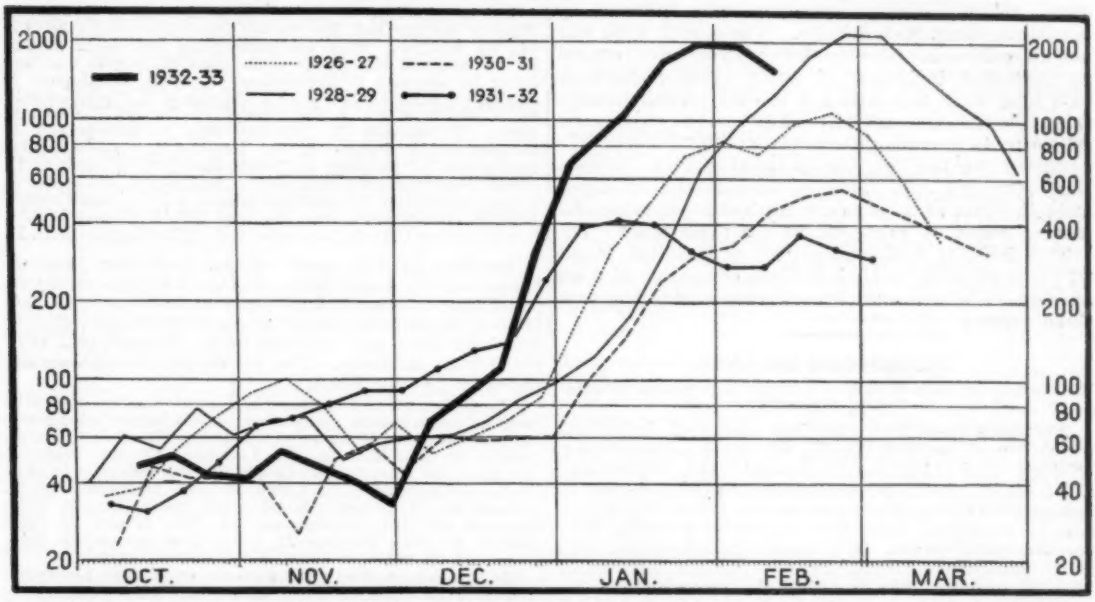


Chart showing the course of various influenza outbreaks in England and Wales. The numbers of deaths are charted as logarithms instead of actual figures, and it will be seen that this greatly exaggerates the earlier stages of the epidemics, and flattens the peaks. (Reproduced with alterations and additions from the League of Nations *Weekly Epidemiological Record* for Jan. 19th.)

Influenza

LAST week's figures show that the outbreak of influenza in this country is now abating. In the seven days ending Feb. 11th there were 1306 deaths in the 118 great towns of England and Wales, against 1934 and 1911 in the previous two weeks, while in London the total fell from 368 to 261. The accompanying chart shows the course of the epidemic in comparison with those of some other recent years. It will be seen that the peak has been reached more rapidly than in 1928-29, when the largest total of deaths in a single week was about the same.

TABLE I

—	118 great towns.	South-eastern area.	Greater London.	Northern area.	Midland area.	Eastern area.	South-western area.	Wales and Monmouthshire.
Jan. 7th	1·73	1·22	1·04	1·70	3·65	0·42	0·57	0·38
,, 14th	2·64	2·56	2·36	2·78	3·25	1·78	0·91	0·98
,, 21st	4·04	3·73	3·63	4·81	4·32	1·36	1·81	1·58
,, 28th	4·91	4·06	4·08	5·66	5·08	5·98	2·60	7·15
Feb. 4th	4·85	4·39	4·12	5·27	4·00	8·71	4·76	7·53

More detailed figures which are now available for the week ended Feb. 4th will be found in our usual analysis of the Registrar-General's weekly return, under the heading of Infectious Disease. Table I., which is reproduced from the return, gives influenzal death-rates per 1000 per annum in the towns of the various areas, and shows that the eastern area and Wales were now bearing the brunt, after enjoying comparative immunity until a late stage. The rate for Greater London for the first time rose above the average of the 118 great towns. Table II gives the mortality in the four main age-groups.

TABLE II

—	Ages 0–25		25–45		45–65		65+		Total deaths
	Deaths.	Per cent.	Deaths.	Per cent.	Deaths.	Per cent.	Deaths.	Per cent.	
Jan. 7th	75	11·0	143	21·0	214	31·4	249	36·6	681
,, 14th	112	10·8	196	18·8	336	32·3	397	38·1	1041
,, 21st	156	9·8	311	19·6	525	33·0	597	37·6	1589
,, 28th	164	8·5	338	17·5	649	33·5	783	40·5	1934
Feb. 4th	155	8·1	339	17·7	603	31·6	814	42·6	1911

Influenza in Glasgow.—A statement issued by Dr. A. S. M. Macgregor, M.O.H. for Glasgow, shows that the outbreak began there at the beginning of December and reached its height during the last fortnight of the month. The fall was rapid, although latterly it tended to taper off gradually and to merge into a period of increase of respiratory affections during the spell of cold weather. The general death-rate was at its highest (28·7 per 1000 per annum) during the week ended Dec. 24th, and the incidence of influenza fell far short of the experience of January, 1929, when the death-rate rose to 50 per 1000. The proportion of absentees from school was 15 per cent. on Dec. 23rd, compared with the ordinary figure of 5·5, the corresponding figures for teachers being 5 and 1·5 per cent. respectively. Except in one large general hospital, where the proportion off duty reached 10 per cent., the hospital staffs did not suffer as much as the outside population. The prevailing

type of illness was of sharp onset and short duration, ushered in with shivering and fever followed by headache and joint pains, and lasting two or three days. Often the acute symptoms were followed by persistent cough and debility. The gastric type was not in evidence. The outbreak apparently caused an increased incidence of acute lobar pneumonia at a time when this does not usually prevail to anything like the same extent. Of 49 cases of pneumonia (30 lobar, 10 broncho-pneumonia, and 9 "influenzal") admitted to one of the hospital wards between Dec. 15th and Jan. 17th, 17 proved fatal, giving a mortality-rate of 35 per cent. against a pre-influenzal rate of about 15 per cent. in the same ward. Dr. Ian Christie, at Knightswood Fever Hospital, found 53 per cent. of type II. infections compared with an average of 36 per cent. for the city during the past three years.

INFECTIOUS DISEASE

IN ENGLAND AND WALES DURING THE WEEK ENDED FEB. 4TH, 1933

Notifications.—The following cases of infectious disease were notified during the week:—Small-pox, 18 (last week 14); scarlet fever, 1757; diphtheria, 678; enteric fever, 9; acute pneumonia (primary or influenzal), 5151 (last three weeks 3456, 3781, and 4821); puerperal fever, 37; puerperal pyrexia, 154; cerebro-spinal fever, 90; acute poliomyelitis, 11; acute polio-encephalitis, 1; encephalitis lethargica, 15; dysentery, 24; ophthalmia neonatorum, 91. No case of cholera, plague, or typhus fever was notified during the week.

The number of cases in the Infectious Hospitals of the London County Council on Feb. 7th–8th was as follows: Small-pox, 56 under treatment, 4 under observation (last week 44 and 5 respectively); scarlet fever, 1611; diphtheria, 1597; enteric fever, 8; measles, 271; whooping-cough, 670; puerperal fever, 23 (plus 11 babies); encephalitis lethargica, 230; poliomyelitis, 1; other diseases, 321. At St. Margaret's Hospital there were 15 babies (plus 9 mothers) with ophthalmia neonatorum.

The notifications of cerebro-spinal fever have been rising steadily for the last few weeks, the figures being 38, 47, 61, 66, and 90. They are distributed this week among 23 counties and 64 sanitary authorities, the largest numbers being in *Durham* 6 (Sunderland 3, West Hartlepool 1, Easington R.D. 2), *Lancaster* 8 (Liverpool 2, Manchester 2, St. Helens 2, Wigan 1, Rawtenstall 1), *London* 13 (Bethnal Green 1, Hackney 1, Hammersmith 1, Hampstead 1, Kensington 1, Poplar 1, St. Pancras 1, Shoreditch 1, Southwark 1, Stepney 2, Westminster 1, Woolwich 1), *Yorks West Riding* 26 (Barnsley 1, Bradford 2, Doncaster 3, Leeds 3, Sheffield 7, Adwick-le-Street U.D. 1, Conisbrough U.D. 2, Normanton U.D. 2, Royston U.D. 1, Shipley U.D. 1, Stocks Bridge U.D. 1, Doncaster R.D. 1, Rotherham R.D. 1).

Deaths.—In 118 great towns, including London, there was no death from small-pox or enteric fever, 19 (0) from measles, 5 (0) from scarlet fever, 81 (14) from whooping-cough, 40 (4) from diphtheria, 42 (10) from diarrhœa and enteritis under 2 years, and 1911 (368) from influenza. The figures in parentheses are those for London itself.

The towns which reported the largest number of deaths from influenza were as follows, last week's figures being given in parentheses: Manchester 87 (100), Sheffield 63 (85), Bristol 62 (65), Hull 49 (27), Liverpool 49 (49), Bradford 38 (18), West Ham 36 (24), Cardiff 36 (36), Leicester 35 (37), Stoke-on-Trent 34 (72), Leeds 31 (56), Oldham 29 (22), Salford 29 (20), Norwich 26 (17), Cambridge 25 (12), Swansea 25 (28), Nottingham 23 (37), Wigan 22 (20), Bolton 21 (43), Preston 21 (12), Birmingham 21 (24), Plymouth 21 (6).

Six fatal cases of measles were reported from Liverpool, 2 from Hull. Deaths from whooping-cough were widely distributed, 6 being reported from St. Helens, 5 from West Ham, 4 from Darlington; each 3 from Leeds, Sheffield, and Stoke-on-Trent. Diphtheria claimed 5 victims at Liverpool.

The number of stillbirths notified during the week was 273 (corresponding to a rate of 42 per 1000 total births), including 35 in London.

MEDICAL NEWS

University of Cambridge

On Feb. 11th the following degrees were conferred:—

M.D.—*A. D. Charters, J. R. Armstrong, S. W. Savage, and J. L. Newman.

M.B. and B.Chir.—R. S. C. McDade and S. S. Jaikaran.

M.B.—G. H. A. Graetz.

B.Chir.—*R. L. Osmaston and K. M. A. Perry.

* by proxy.

Royal College of Surgeons of England

At a meeting of the council held on Feb. 9th, with Sir Holburt Waring, the president, in the chair, diplomas of membership were conferred on 131 of the 134 candidates whose names were given in our issue of Feb. 4th as recipients of the L.R.C.P. (with the exception of B. T. W. Harvey, H. J. M. Robinson, and H. G. Ungley).

Resolutions of condolence were passed on the death of Sir Percy Sargent, vice-president of the College, and of Sir Frederic Hallett, formerly secretary of the examining board in England and the Imperial Cancer Research Fund. Mr. G. E. Gask, professor of surgery in the University of London, was elected a vice-president in place of Sir Percy Sargent.

The president reported the appointment of Mr. A. H. Burgess, professor of clinical surgery in the University of Manchester, as Bradshaw lecturer, and of Mr. L. W. G. Malcolm, conservator of the Wellcome Historical Medical Museum as Thomas Vicary lecturer for the ensuing year. Mr. Victor Bonney was re-elected the representative of the College on the Central Midwives Board, and Sir Cuthbert Wallace was elected a member of the executive committee of the Imperial Cancer Research Fund.

The president reported that an election of five Fellows into the council would take place on Thursday, July 6th, at 11 A.M., in the vacancies occasioned by the retirement in rotation of Lord Moynihan, Sir John Lynn-Thomas, Mr. Burgess, and Mr. V. Warren Low, and by the death of Sir Percy Sargent; that notice of the election would be given to the Fellows by advertisement and by circular on March 10th; that March 20th would be the last day for the nomination of candidates; and that a voting paper would be sent on April 4th to every Fellow whose address was registered at the College.

University of London

The University Extension and Tutorial Classes Council, in coöperation with the Central Association for Mental Welfare, has arranged a course, from Monday, May 8th, to Saturday, May 20th, on mental deficiency; it is specially designed for medical practitioners who are definitely concerned with the care of subnormal or abnormal persons. The course is divided into two parts, and part I. (May 8th to May 13th) may be taken separately if desired; part II. (May 13th to May 20th) may only be taken separately by those who have in previous years attended part I. The lectures will be given daily from 10 A.M. to 12.30 P.M. at the University, South Kensington, and the lecturers will include Dr. A. F. Tredgold, Dr. F. C. Shrubsall, Prof. Cyril Burt, Dr. William Moodie, and Dr. Emanuel Miller. Clinical work will also be arranged for each student. Further particulars may be had from Miss Evelyn Fox at the University Extension Department, University of London, South Kensington, S.W.7, to whom applications should be sent before April 18th.

British Post-Graduate Medical School

Sir Austen Chamberlain has accepted nomination by the Minister of Health to be a governor of this school, and the governors have appointed him chairman of the governing body in succession to Lord Chelmsford, who resigned on his election to be warden of All Souls College, Oxford.

Presentation to a Medical Man

Upon his retirement from the position of senior honorary surgeon of Saffron Walden Hospital, with which he has been connected for more than 40 years, Dr. H. C. Bartlett has been presented with a silver salver. In acknowledging the gift Dr. Bartlett said he believed that, with one exception, he was the last medical student to be apprenticed. The exception was Dr. Walter Gifford Nash, who has recently retired from the senior surgeoncy of Bedford Hospital. He said that his work "was to dispense, roll bandages, take out teeth, walk round the wards, visit the sick, answer the night bell, take down the shutters in the morning and put them up at night, go to church twice on Sunday, wear a tail coat and bowler hat, and to do everything possible to help the man with whom he was apprenticed."

Royal College of Physicians of Edinburgh

At a quarterly meeting of the College, held on Feb. 7th, with Dr. Robert Thin, the president, in the chair, Dr. Ion Simson Hall (Edinburgh) was introduced and took his seat as a Fellow of the College. Dr. Robert Lees (Edinburgh), Dr. Charles Mackay Seward (Exeter), and Dr. Ian George Wilson Hill (Edinburgh) were elected to the Fellowship.

London School of Hygiene and Tropical Medicine

The next series of eight lectures and demonstrations on tropical hygiene, which are intended for men and women outside the medical profession proceeding to the tropics, will be given by Lieut.-Colonel G. E. F. Stammers from March 6th to 15th. The synopsis may be had from the secretary of the school, Keppel-street, Gower-street, W.C.1.

Royal Statistical Society

A meeting of this society will be held on Tuesday, Feb. 21st, at 5.15 P.M., in the hall of the Royal Society of Arts, John-street, Adelphi, London, W.C., when Mr. A. Bradford Hill, D.Sc., will read a paper on Some Aspects of the Mortality from Whooping-cough.

Medico-Legal Society

An ordinary meeting of this society will be held at 11, Chandos-street, Cavendish-square, W. 1, on Thursday, Feb. 23rd, at 8.30 P.M., when a paper will be read by Dr. S. C. Dyke on The Human Blood-Groups, followed by a discussion which should attract considerable attention, seeing the significance which now has to be attached to findings along this line. Members may introduce guests to the meeting upon production of the member's private card.

Central Association for Mental Welfare

The association has again rented the Green Lady Hostel, Littlehampton, for the use of local authorities, institutions, and others as a holiday home for mental defectives. The hostel will be available for two periods: from March 31st to May 26th, and from Sept. 1st to Oct. 27th. Applications for the first period should be sent not later than Feb. 27th to the secretary of the association, 24, Buckingham Palace-road, London, S.W.1, from whom further information may be had.

Fellowship of Medicine and Post-Graduate Medical Association

The next lecture in the series on practical problems in medicine and surgery will take place on Tuesday, March 28th, at 11, Chandos-street, Cavendish-square, London, W., at 4 P.M., when Mr. J. P. Lockhart-Mummery will lecture on the Causes and Treatment of Incontinent Anus. There will be a week-end course of practical demonstrations in general medicine and surgery at the New General Hospital, Southend-on-Sea, on Saturday, March 4th, and Sunday, March 5th. The course will include ward rounds, lecture-demonstrations, demonstration of X ray films, and a discussion on Infection by the Staphylococcus. Further particulars may be had from the secretary of the Fellowship at 1, Wimpole-street, London, W.1.

Treatment of Industrial Rheumatism

In a lecture given at the Royal Institute of Public Health on Feb. 8th, Dr. W. S. C. Copeman said that chronic rheumatism costs this country £17,000,000 per annum, yet the only *official* methods of combating it at present are by the payment of weekly allowances whilst the patient is not at work, and by analgesic drugs. Most of the schemes put forward for dealing with it entailed the *de*centralisation of treatment centres. Dr. Copeman felt this method to be wasteful and likely to be inefficient. In any practical scheme diagnosis must in the first instance be in the hands of the insurance practitioner, or failing this, by "rheumatic advisory centres," which may be run apart from treatment clinics in all thickly populated and industrial parts of towns. If special (physical) treatment should be required, the patients are referred from these centres to a central clinic. Treatment at these "town clinics" must be supervised by experts, and must be given after working hours. If treatment in bed is required, or more than two months' treatment, cases should be sent on to a spa or provincial general hospital. Afterwards they must be referred directly back to their own doctor and "followed up" from the centre.

Sir Edward Stewart, M.D., the chairman, said that the British Red Cross Society were considering the adoption of the scheme outlined by Dr. Copeman, since it appeared necessary that any scheme which might later be put into operation in this country should be on a national scale. If the problem were left in the hands of local authorities there would be overlapping between the various areas.

WE regret to announce the death on Feb. 12th, in his 70th year, of Dr. T. B. Hyslop, sometime medical superintendent of the Bethlem Royal Hospital.

Hunterian Society

Sir Crisp English will deliver the Hunterian oration at the Mansion House, London, E.C., at 9 P.M., on Monday, Feb. 27th. The subject of the oration will be the Language of Facts.

Malmesbury Hospital

Last year 353 in-patients were admitted to the Malmesbury and District Hospital and Maternity Home, 40 of whom were maternity cases. The average stay was 21·5 days, and the average weekly cost of maintenance £2 11*s.* 2*d.*

Birmingham Hospitals Contributory Association

The income last year was £272,000, an increase, notwithstanding trade depression, of £70,000. In the five years since the Hospital Saturday Fund was linked with the Contributory Association rather more than a million has been raised. The contributors number 445,000.

Liverpool's Hospital "Flying Squad"

The Merseyside Hospitals' Council is endeavouring to bring up to 250 the "flying squad" of motorists who volunteer to take blood donors to hospital and relatives to patients dangerously ill during the hours of the night when public transport is not available. The corps already numbers 180, many of whom are young women, but the volunteers' duties are increasing so rapidly that a considerable augmentation is necessary. Each member takes one month's duty at a time.

Anti-cancer Serum

The central public health committee of the London County Council has granted permission to Dr. T. Lumsden, director of the cancer research laboratory at the London Hospital, to arrange for the treatment with anti-cancer serum of patients in the Council's hospital who may assent to such treatment, provided the work is carried on in each case under the supervision and control of the medical superintendent of the hospital concerned.

Volunteer Nurse Patrols

A corps of women volunteer nurses is being trained at Glasgow to patrol the main roads in the west of Scotland to give aid to persons injured in accidents. The nurses, who will become a unit of the St. George's Ambulance Association, will tend the injured on their way to hospital and supplement the ambulance corps in first-aid service; they will wear a uniform similar to that of the Voluntary Aid Detachment. It is hoped eventually that the service will cover the whole of Scotland.

The Institute of Medical Psychology

A post-graduate course in psychotherapeutic theory and method has been arranged by this institute. The work of the course is divided into two groups (each limited to six in number); members of the first group are asked to give three hours twice a week, while members of the secondary group are expected to devote 12 hours weekly to the work of the course and to attend on three days. The introductory part of the work of the first group may be attended by medical practitioners as an isolated course of lectures, which will be given at 4.45 P.M. and 5.45 P.M. on Fridays and Tuesdays from March 10th to April 11th. Applications and inquiries should be sent to the honorary lecture secretary, at the institute, 6, Torrington-place, London, W.C.1.

Aberdeen Hospitals

Last year was marked by a further extension of the work of the radium department of Aberdeen Royal Infirmary, 557 treatments by radium and radon having been given as compared with 430 in 1931. In consequence of the insufficient supply of radium a further loan of 200 mg. was obtained and converted into radon, as it had been found that the treatment of suitable cases by this agency was the more economical. There were 6780 in-patients, an increase of over 500, and 26,521 out-patients, an increase of nearly 1000. The average cost per occupied bed was £88 10*s.* 10*d.* as compared with £93 0*s.* 1*d.* in 1931; the average cost of each in-patient was £4 17*s.*, a fall of 11*s.* 7*d.* Motor accident cases numbered 143; they cost £800, in respect of which £203 has, so far, been recovered. The Aberdeen Royal Mental Hospital is to be reconstructed and enlarged at a cost of £100,000, instead of £70,000 as originally contemplated. Since only £25,000 is available, the remaining £75,000 will have to be borrowed on the basis of repayment over a period of 30 years.

Pay-beds at the Cancer Hospital, Fulham

The governors of this free hospital recently decided to introduce a Bill in Parliament to enable them to make charges to patients desirous of special accommodation.

Cardiff Royal Infirmary

Last year 5654 in-patients and 36,868 out-patients were treated at this hospital at a total cost of £61,694, an average of £9 1*s.* per in-patient and 5*s.* 10*d.* per out-patient. The average cost per occupied bed was £140 4*s.* During the year £3778 was collected in sixpences.

Sussex Provident Scheme

Under this scheme during 1932 over £20,000 was paid to hospitals and coöperating institutions and organisations which only received £332 in 1921. The scheme was started in 1920 and, as these figures show, has been very successful; during the 12 years £110,627 have been contributed. Last year the Royal Sussex County Hospital received £7180 for services rendered to members; the Royal Alexandra Hospital for Sick Children, £2108; New Sussex Hospital, £1939; Hove Hospital, £1102; Haywards Heath Hospital, £1051; and Brighton Corporation, £1030.

Medical Diary

SOCIETIES

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.
TUESDAY, Feb. 21st.—5.30 P.M., GENERAL MEETING OF FELLOWS. 8.30 P.M., PATHOLOGY. Meeting at the Bland-Sutton Institute of Pathology, Middlesex Hospital, W. Demonstrations. Prof. S. L. Baker: Doubly Refractile Lipoids in Pulmonary Phagocytes. Dr. W. Cramer: Organ Incidence and Total Incidence of Cancer in England and Holland. Prof. J. McIntosh: An Unusual Source of Tetanus Infection. Mr. J. W. Cook and Prof. E. C. Dodds: Biological Activity of Synthetic Organic Compounds with Special Reference to Œstrus. Dr. L. E. H. Whitby and Prof. J. McIntosh: Observations on the Bacteriology of Epidemic Influenza. Mr. D. H. Patey: The Spread of Carcinoma by the Portal Vein. Dr. R. W. Scarff: Lesions in Experimental Hypertension. Dr. L. W. Proger: Apparatus for Cinema Microphotography. Mr. C. J. Britton: Experimental Reticulocytosis and Punctate Basophilia. Mr. E. G. Muir: The Pathology of Prostatic Enlargement. Dr. C. C. Bryson: The Histological Grading of Intrabuccal Carcinoma. Dr. A. C. Counsell: Pathological Specimens.
WEDNESDAY.—5 P.M., COMPARATIVE MEDICINE and THERAPEUTICS AND PHARMACOLOGY. Discussion: Plant Poisoning in Man and Animals. Speakers: Mr. W. Horner Andrews, Sir William Willcox, Mr. J. A. Nicholson, Dr. G. Clough, and Dr. P. Haas.
THURSDAY.—8.30 P.M., UROLOGY. Paper. Mr. J. Swift Joly: Bilateral Renal Calculi.
FRIDAY.—5.30 P.M., DISEASE IN CHILDREN. (Cases at 4.30 P.M.). Cases will be shown. 8 P.M., EPIDEMIOLOGY AND STATE MEDICINE. Paper. Dr. G. C. M. M'Gonigle (Stockton-on-Tees): Some Results of the Removal of a Slum Population to Modern Dwellings.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.
MONDAY, Feb. 20th.—9 P.M., Mr. V. Z. Cope: Pathology of Acute Abdominal Disease (1st Lettsomian lecture).

CHELSEA CLINICAL SOCIETY.
TUESDAY, Feb. 21st.—8.30 P.M. (at the Hotel Rembrandt, Thurloe-place, S.W.), Mr. Harold G. Taylor will open a discussion on Contraception. (Preceded by dinner at 7.30 P.M.)

MEDICO-LEGAL SOCIETY.
THURSDAY, Feb. 23rd.—8.30 P.M. (at 11, Chandos-street, Cavendish-square, W.), Dr. S. C. Dyke: The Human Blood Groups. To be followed by a Discussion.

ST. JOHN'S HOSPITAL DERMATOLOGICAL SOCIETY.
WEDNESDAY, Feb. 22nd.—5 P.M. (at 49, Leicester-square, W.C.), Dr. H. Gordon: Arsenical Jaundice.

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.
WEDNESDAY, Feb. 22nd.—2.30 P.M. (at 11, Chandos-street, W.), Quarterly general meeting. Dr. D. R. MacCalman: The Rohrschach Test and its Clinical Application.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.
THURSDAY, Feb. 23rd.—5 P.M., Dr. R. Cruickshank: Pneumococcal Infections (1st Milroy lecture).

ROYAL COLLEGE OF SURGEONS, Lincoln's Inn-fields, W.C.
MONDAY, Feb. 20th.—5 P.M., Mr. Laurence O'Shaughnessy: Thoracic Surgery. (Hunterian lecture.)
WEDNESDAY.—5 P.M., Mr. G. A. Mason: Surgical Significance of the Vitelline Diet. (Hunterian lecture.)
FRIDAY.—5 P.M., Mr. E. R. Flint: Pre-operative Procedure. (Hunterian lecture.)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.
MONDAY, Feb. 20th to SATURDAY, Feb. 25th.—ROYAL FREE HOSPITAL, Gray's Inn-road. Fri., Antenatal demonstration by Dame Louise McIlroy at 5 P.M.—ST. JOHN'S HOSPITAL, Leicester-square, W.C. Post-graduate Course in Dermatology. Clinical instruction daily at 2 P.M. and 6 P.M. Lectures at 5 P.M. on Tues. and Thurs.—NATIONAL TEMPERANCE HOSPITAL, Hampstead-road, N.W. Evening M.R.C.P. Course, Mondays and Fridays at 8 P.M.—PRINCE OF WALES'S HOSPITAL, Tottenham, N. Post-graduate Course in Medicine, Surgery and the Specialties. All day.—HOSPITAL FOR CONSUMPTION, Brompton, S.W. Post-graduate Course in Practical Pathology dealing with Laboratory Methods and the Interpretation of Results, Mons. and Thurs., 11.30 A.M. to 1 P.M.—FELLOWSHIP OF MEDICINE, 1, Wimpole-street, W. The Interpretation of Pyelograms. Mon., Wed., and Fri., 8 P.M.—Courses open only to Members and Associates of the Fellowship of Medicine.

ST. MARK'S HOSPITAL, City-road, E.C.
THURSDAY, Feb. 23rd.—4 P.M., Dr. J. K. Hasler: Anæsthesia in Rectal Surgery.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn-road, W.C.
FRIDAY, Feb. 24th.—4 P.M., Mr. A. Lowndes Yates: Diseases of the Ear which lead to Deafness.

ST. PETER'S HOSPITAL FOR STONE, Henrietta-street, W.C.
WEDNESDAY, Feb. 22nd.—3 P.M., Mr. J. G. Sandrey: Congenital Abnormalities of the Upper Lip.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL, Denmark-hill, S.E.
THURSDAY, Feb. 23rd.—9 P.M., Dr. E. ff. Creed: Recent Work on Some Blood Diseases.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.
THURSDAY, Feb. 23rd.—3 P.M., Dr. Wilfred Harris will demonstrate.

NATIONAL HOSPITAL, Queen-square, W.C.
MONDAY, Feb. 20th.—2 P.M., Dr. Riddoch: Out-patient Clinic. 3.30 P.M., Dr. Hinds Howell: Vascular Disease of the Nervous System.
TUESDAY.—2 P.M., Dr. Walshe: Out-patient Clinic. 3.30 P.M., Dr. Grainger Stewart: Spinal Tumours and Syringomyelia.
WEDNESDAY.—2 P.M., Dr. Martin: Out-patient Clinic. 3.30 P.M., Dr. James Collier: Clinical Demonstration.
THURSDAY.—2 P.M., Dr. Kinnier Wilson: Out-patient Clinic. 3.30 P.M., Dr. Walshe: Cerebral Tumours.
FRIDAY.—2 P.M., Dr. Adie: Out-patient Clinic. 3.30 P.M., Dr. James Collier: Virus Diseases of the Nervous System.

LONDON JEWISH HOSPITAL, Stepney Green, E.
THURSDAY, Feb. 23rd.—4 P.M., Dr. Geoffrey Konstam: Anæmias Due to Defective Maturation of Red Blood Cells.

UNIVERSITY COLLEGE, Gower-street, W.C.
WEDNESDAY, Feb. 22nd.—4.15 P.M., Dr. J. S. Prendergast: Renaissance Medicine.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, 49, Leicester-square, W.C.
TUESDAY, Feb. 21st.—5 P.M., Dr. J. A. Drake: Leprosy.
THURSDAY.—5 P.M., Dr. A. Burrows: Leukæmia Cutis, Mycosis Fungoides.

ROYAL INSTITUTE OF PUBLIC HEALTH.
WEDNESDAY, Feb. 22nd.—11.30 A.M., Demonstration at the British Red Cross Society Clinic for Rheumatic Diseases, Peto-place, Regent's Park, N.W.

SOUTH-WEST LONDON POST-GRADUATE ASSOCIATION, St. James's Hospital, Ouseley-road, Balham, S.W.
WEDNESDAY, Feb. 22nd.—4 P.M., Mr. E. Lindsay: Painful Feet.

CHADWICK TRUST.
TUESDAY, Feb. 21st.—5 P.M. (at the Royal Society of Tropical Medicine, 26, Portland-place, W.), Dr. Matthew B. Ray: The Hippocratic Tradition.

MANCHESTER ROYAL INFIRMARY.
TUESDAY, Feb. 21st.—4.15 P.M., Dr. E. W. Twining: The Value of X Rays in Cardiac Conditions.
FRIDAY.—4.15 P.M., Prof. F. E. Tylecote: Demonstration of Medical Cases.

ST. MARY'S HOSPITALS, Manchester.
FRIDAY, Feb. 24th.—4.15 P.M., Post-graduate Lecture (at the Whitworth-street West Hospital), Dr Ward: Problems of Infant Feeding.

GLASGOW POST-GRADUATE LECTURES.
TUESDAY, Feb. 21st.—3.30 P.M. (in the Faculty Hall, St. Vincent-street), Dr. Nora I. Wattie: Gonorrhœal Infection in Women.
WEDNESDAY.—4.15 P.M. (at the Ear, Nose and Throat Hospital), Dr. W. S. Syme: Ear, Nose and Throat Cases.

INDEX TO "THE LANCET," VOL. II., 1932

THE Index and Title-page to Vol. II., 1932, which was completed with the issue of Dec. 31st, is now ready. A copy will be sent gratis to subscribers on receipt of a post-card addressed to the Manager of THE LANCET, 7, Adam-street, Adelphi, London, W.C.2. Subscribers who have not already indicated their desire to receive Indexes regularly as published should do so now.

NOTES, COMMENTS, AND ABSTRACTS

TESTS FOR MOTORISTS

IT is estimated that in the 14 years since the war 1,800,000 men, women, and children have been injured or killed on the roads of Great Britain. The treatment of the injured is believed to cost our hospitals nearly £300,000 a year. It is said that over 98 per cent. of these traffic accidents are avoidable. What would the public think if an epidemic took a similar toll of life and if it were shown that a similarly high proportion of cases were preventable? Unable to share the general attitude of fatalism in these matters, the Pedestrians' Association comes forward with a pamphlet explaining, Why Britain should have Motor Driving Tests. The Royal Commission, on whose report the Road Traffic Act of 1930 was based, decided against tests. The Act itself requires no tests of intending motorists; it merely requires applicants for licences to make a declaration. The prescribed form of declaration undoubtedly eliminates a proportion of drivers who are physically unfit or disabled. Would not a proper test eliminate a larger number? Would it not therefore make the roads safer—a result which the Road Traffic Act has failed to achieve?

There are four arguments against tests. The beginner, it is said, is not a dangerous driver, because he is too frightened to take risks. The reckless driver, who is the chief danger, is not eliminated by tests. Tests if perfunctory are valueless; if thorough they are impracticable. The cost of tests would far outweigh the value. The Pedestrians' Association, in controverting these four arguments, hints that a fifth has influence with the motor trade—namely, a fear that if tests mean fewer drivers, there will be some decline of sales. Such an argument could hardly be seriously stated. Bad as trade is, it has no right to a stimulus which will put a few more people into the cemeteries and hospitals as well as into the factories. The Pedestrians' Association tells us that Great Britain has the highest density of motor vehicles per mile of road of all the countries in the world, and that therefore the highest standard of driving skill is required. It states that we have the worst accident record in the world (if account be taken of the number of cars and population), and that ours is the only civilised country (with the exception of Belgium) which has no tests. This last statement perhaps needs some small qualification. Many towns in England have obtained powers by Local Act for imposing "such reasonable tests as they may think fit" upon persons seeking a licence to drive a hackney carriage in the district. If this is desirable in the case of taxi-drivers, it may also be desirable for lorry-drivers, private motorists, and motor-cyclists. But if the enactment of compulsory tests for all drivers is not practical politics, possibly a beginning can be made with some voluntary system. It should not be beyond the powers of the various motoring associations to devise some criteria of physical fitness and technical competence and to apply them to such members as volunteer to be examined. Would not insurance companies be disposed to offer better terms to examinees who emerged with a first-class diploma? The Pedestrians' Association pamphlet mentions some interesting details of psychological tests evolved by the National Institute of Industrial Psychology.

Tests of course are not put forward as a panacea, but as an essential part of a comprehensive policy to lessen the avoidable accidents which multiply death and suffering. Controversy between pedestrians as such and motorists as such is misleading. All motorists are sometimes pedestrians and many pedestrians are sometimes motorists. But the Pedestrians' Association does well to draw attention to any possible remedy for the appalling loss of life on the roads.

QUININE AND ITS SUCCESSORS

To the Editor of THE LANCET

SIR,—May we correct one or two points in your leading article of Jan. 28th (p. 206) from which misapprehension seems to have arisen. When it is stated that nine-tenths of the world's quinine is made in Java and Sumatra, and one-tenth in India, the reference is obviously to the amount of cinchona bark grown. It is true that the quinine factory at Bandoeng, Java, manufactures large quantities of the product, but most of that sold to-day is made in Holland, Great Britain, Germany, France, Switzerland, and the U.S.A. The world consumption of quinine being somewhere in the region of 500,000 kg. in 1931, it is difficult to see how the figure of 60,000 kg. for the imports of all countries was obtained.

We are, Sir, yours faithfully,

HOWARDS AND SONS, LTD.
(H. LLOYD HOWARD, Director.)

Ilford, Jan. 31st, 1933.

*** The League of Nations pamphlet deals with "quinine or secondary alkaloids of cinchona," since the information which has been received has not ordinarily distinguished between the two. The difficulties encountered in its compilation are described thus: "The figure for imports seems to be accurately known in the case of quinine imported by Governments themselves; but the amount of quinine imported commercially is much less certain, because some of it may be reimported, or some of the goods declared as quinine are not quinine. In these cases the figure for imports is exaggerated." The figure of 60,000 kg. quoted in the article refers to quinine imported by Governments. The table from which it is taken gives, however, two figures, "total" and "corrected total." Under "corrected total" is apparently given the average amount imported over a period, usually over ten years; it is stated to be 59,809 kg. Under "total" appears the quantity imported during the last year for which figures have been received; in 1931 it reached 156,280 kg. The corrected total was used in our leading article.—ED. L.

DETERIORATION IN THE TROPICS

OUR last issue contained an annotation and a report of a discussion on mental and physical deterioration of Europeans in the tropics. Dr. D. V. Latham, in the January issue of the *East African Medical Journal*, describes the disadvantages of living, not only in the tropics, but at a high altitude. European residents in the East African highlands live at levels from 4500 feet upwards. With increasing altitude there is a falling incidence of tropical diseases, but psychological derangements, cardiovascular disease, and lung affections become commoner. The region most densely populated by Europeans lies actually on the Equator, and Dr. Latham believes that the combination of altitude and tropical sun is an important factor in modifying physiology and pathology. Mountain sickness may arise if the energy output is excessive, and the prognosis in pneumonia is distinctly less favourable than at lower altitudes because the anoxæmia induced is more marked. The effect on the mental faculties of life at high altitudes, he finds, is comparable to that of alcohol; some people become morose, others quarrelsome; cautious men may become reckless and reliable men irresponsible. He infers that the mind suffers more readily from fatigue in a reduced oxygen pressure, and irritability and lack of self-control appear more easily. Children suffer physically from a diet sterilised to excess, and morally from the devotion of their African attendants. Dr. Latham concludes by saying that "to my mind it is doubtful if a community will ever be able to overcome the added trials of the sun and altitude in a country where

communications are rapidly improving and the strain of competitive life is daily approaching that found in more temperate climates."

A DIARY OF HEALTH HINTS

Dr. Shrubsall has found a thought on health for every day of the year and embodied the result in a neat little book, one thought to a page, with the appropriate date at the top.[1] An irresistible impulse to treat it as a birthday book will probably prevent the reader from taking it seriously at the outset; this is a pity because most people find one health thought a day quite enough to assimilate, if not too much, and it is convenient and helpful to have a page of sensible information ready to our hands for daily use. Probably the advice given will rarely prove to be applicable to the special trials of each day, but provision has been made to overcome this difficulty; if one wakes convinced that he has cancer on June 24th, only to find that the day's health reminder deals with the dangers of cross-country running, he can turn at once to the index to learn that his present phobia was discussed on Jan. 7th. Sir Arthur Newsholme, in his foreword, points out that references to diet and daily physiological duties recur frequently, and that repetition of advice upon these subjects from various angles is most valuable. More than one date is given up to a note on the increase of street accidents, and Dr. Shrubsall will have performed a service to the community if he can help us to exercise discretion and good sense in our dealings with traffic. He repeatedly advises his readers, when in doubt, to refer their problems to the doctor, but believes that if his suggestions on hygiene are followed the services of a doctor will be required less, rather than more, frequently. Advice is given in straightforward language and on a pleasantly personal note; his devotion to inverted commas, however, makes reading an optical hurdle-race.

Vacancies

For further information refer to the advertisement columns

All Saints' Hospital, Austral-street, West-square, St. George's-road, S.E.—Res. H.S. At rate of £100.
Birkenhead General Hospital.—Res. Sen. H.S. At rate of £150. Also Second H.S., H.P., and Cas. O. Each at rate of £100.
Birmingham Ear and Throat Hospital.—Third H.S. At rate of £150.
Blackburn Royal Infirmary.—Fourth H.S. £250.
Brighton, Sussex Maternity and Women's Hospital.—Res. H.S. £130.
Burnley, Victoria Hospital.—H.P. At rate of £150.
Cambridge, Addenbrooke's Hospital.—Two H.S.'s and Res. Anæsthetist and Emergency Officer. Each at rate of £130.
Carlisle, Cumberland Infirmary.—H.S. At rate of £175. Also H.P., 2nd H.S., and H.S. to Spec. Depts. Each at rate of £155.
Charing Cross Hospital, W.C.—Med. Reg., Surg. Reg. Each £150. Also Registrar to Nose, Throat and Ear Dept. £100.
Chester, East Lancashire Tuberculosis Colony, Gt. Barrow.—Asst. M.O. At rate of £275.
Chester Royal Infirmary.—Hon. Anæsthetist.
Colchester, Royal Eastern Counties Institution.—Asst. in Research Dept. £300.
Coventry and Warwickshire Hospital.—Res. H.S. £125.
Denbigh, North Wales Sanatorium, Llangwyfan.—Jun. Asst. Res. M.O. £250.
Dover, Royal Victoria Hospital.—Res. M.O. £180.
Dudley, Guest Hospital.—Asst. H.S. £170.
General Lying-in Hospital, York-road, Lambeth, S.E.—Jun. Res. M.O. and Anæsthetist. At rate of £100.
Golden-square Throat, Nose and Ear Hospital, W.—H.S. £100.
Harrogate, Royal Bath Hospital.—Res. M.O. At rate of £156.
Hendon Isolation Hospital.—Res. M.O. and Asst. M.O. £500.
Hillingdon County Hospital.—Res. Asst. M.O. £400.
Hospital for Sick Children, Gt. Ormond-street, W.C.—H.P. and H.S. Each at rate of £100.
Ipswich, East Suffolk and Ipswich Hospital.—H.S. £120.
Larbert, Royal Scottish National Institution.—Asst. M.O. £350.
Leeds, Killingbeck Sanatorium.—Sen. Asst. Res. M.O. £350.
Leeds Public Dispensary.—Hon. Physician.
Leigh Infirmary, Lancashire.—Res. H.S. At rate of £175.
Liverpool Stanley Hospital.—One H.P. and Two H.S.'s. Each £100.
Liverpool, Women's Hospital, Catherine-street.—H.S. At rate of £100.
London Homœopathic Hospital, Great Ormond-street and Queen-square, W.C.—Asst. Physician.
Manchester Babies' Hospital, Burnage-lane, Levenshulme.—Jun. Res. M.O. At rate of £50.
Manchester, Crumpsall Hospital and Institution.—Med. Supt. £1200.
National Hospital for Diseases of Heart, Marylebone, N.W.—Res. M.O. At rate of £150.
National Temperance Hospital, Hampstead-road, N.W.—Hon. Asst. Physician.
Newcastle-on-Tyne, Royal Victoria Infirmary.—Jun. Surg. Reg. £150.
Northwood, Mount Vernon Hospital.—H.S. At rate of £150.
Nottingham General Hospital.—H.S. At rate of £150.
Oswestry, Shropshire Orthopædic Hospital and Agnes Hunt Surgical Home.—H.S. At rate of £200.
Paddington Metropolitan Borough.—Visiting M.O. One and a half guineas per attendance.
Plymouth City General Hospital.—Med. Supt. £1000.
Preston, Sharoe-green Hospital.—Res. Asst. M.O. At rate of £150.
Prince of Wales's General Hospital, N.—Res. Sen. and Jun. H.P.'s and H.S.'s. At rate of £120 and £90 respectively.
Princess Elizabeth of York Hospital for Children, Shadwell, E.—H.S. At rate of £125.
Queen Charlotte's Maternity Hospital, Marylebone-road, N.W.—Dist. Res. M.O. Also Asst. Res. M.O. Each at rate of £80.
Queen's Hospital for Children, Hackney-road, E.—H.P. and Cas. O. Each at rate of £100.
Royal Free Hospital, Gray's Inn-road, W.C.—Chief Clin. Asst. for Ophthalmic Dept.
St. John's Hospital for Diseases of the Skin, 49, Leicester-square, W.C.—Out-patient and In-patient Med. Regs. Each £50.
St. Mary's Hospital, W.—Director of V.D. Clinic. £400.
St. Mary's Hospital for Women and Children, Plaistow, E.—Hon. Ophth. S.
St. Thomas's Hospital.—Res. Anæsthetist.
Shrewsbury, Royal Salop Infirmary.—Res. Surg. O. £250.
Weston-super-Mare General Hospital.—Res. H.S. £150.
Windsor, King Edward VII. Hospital.—Res. M.O. £200.

The Chief Inspector of Factories announces a vacant appointment for a Certifying Factory Surgeon at Huddersfield (East York).

Births, Marriages, and Deaths

BIRTHS

FORD.—On Feb. 8th, at The Goffs, Eastbourne, the wife of Dr. J. Norman C. Ford, of a daughter.

HUBERT.—On Feb. 2nd, at Oakley-street, Chelsea, the wife of Dr. W. H. de B. Hubert, of a daughter.

JOSCELYNE.—On Feb. 6th, the wife of Patrick Joscelyne, M.B., of Longmead-avenue, Bishopston, Bristol, of a daughter.

SCORER.—On Feb. 12th, at Dellfield, Hempstead-road, Watford, the wife of Dr. Scorer, of a son.

SELBY.—On Feb. 4th, at "Midway," Neston, Wirral, Cheshire, the wife of Robert Selby, F.R.C.S.E., of a daughter.

WAKELEY.—On Jan. 31st, the wife of Cecil P. G. Wakeley, F.R.C.S., of a son.

WELLS.—On Feb. 1st, at Havenfield, Great Missenden, the wife of Dr. Arthur Q. Wells, of a son.

MARRIAGES

KERSLEY—YEOMANS.—On Feb. 1st, at Woolbeding Church Midhurst, George Durant Kersley, M.R.C.P., to Mary Ada Roper Yeomans, of Midhurst, Sussex.

DEATHS

BALDWIN.—On Feb. 6th, at his residence, The Green, Lockwood, Huddersfield, Henry (Harry) Clifford Baldwin, M.R.C.S., L.R.C.P. Lond.

CLARKE.—On Feb. 12th, at Bolingbroke-grove, S.W., Dr. Thomas Clarke (late of Pewsey, Wilts), aged 80.

CUSCADEN.—On Feb. 6th, at Melbourne, Australia, Major-General Sir George Cuscaden, V.D., late Director-General Australian Army Medical Services, aged 75 years.

HARSANT.—On Feb. 10th, at Tower House, Clifton Down-road, Bristol, William Henry Harsant, F.R.C.S., in his 83rd year.

KUNHARDT.—On Feb. 9th, suddenly, at his home, Gorse Hill, Totland Bay, Lieut.-Colonel John Kunhardt, I.M.S. (retd.).

MILLER.—At "Elm House," Hawick, on Jan. 10th, 1933, William Miller, M.B., Ch.B., M.R.C.P. Edin., younger son of Mr. and Mrs. William Miller, 5, Park-place, Dunfermline.

PARKIN.—On Wednesday, Feb. 8th, 1933, suddenly, at The Cedars, Osborne-road, Newcastle-upon-Tyne, Alfred Parkin, M.D., F.R.C.P., F.R.C.S., beloved husband of Elizabeth Parkin. Service at Jesmond Wesleyan Church, Clayton-road, Saturday, 11.20 A.M. Interment Jesmond Old Cemetery, 12 noon.

WALL.—On Feb. 8th, at Herne Hill, Vivian Francis Wall, M.R.C.S., L.R.C.P.

WOOD.—On Feb. 6th, at Bexhill, after a long illness, George Benington Wood, M.B., C.M., of Little Coopers, Eversley, Hants, and formerly of Sandown, I.O.W., aged 72.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

[1] Things to be Desired, or Daily Health Reminders. By W. W. Shrubsall, D.P.H. With a foreword by Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P. London: John Bale, Sons and Danielsson, Ltd. 1932. Pp. 370. 5s.